

The Magic Symbol Repertoire of Talismanic Rings from East and West Africa

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Abstract: In West Africa, Berber groups such as the Tuareg of Mali and Niger use inscribed silver jewelry – rings, pendants and plaques – as talismans. A ring with a curved or flat frontal area may be inscribed with a linear cipher or, if large, carry a “magic square” design. A survey of 132 Tuareg/Berber items revealed that the symbol repertoire appears to be drawn from overlapping categories that include Eastern Arabic and Perso-Arabic numerals, and possibly Western digits and Indian Devanagari numbers as well; Arabic letters; Tifinagh and Libyco-Berber characters; and the Islamic Seven Seals (the *ism al-a‘zam* or Greatest Name). Most items combine symbols of different types, and reflections and rotations of stock symbols are common. The magic squares sometimes display complete or partial symmetry, with diagonals containing repeats of a single symbol. No two designs were identical, but it was possible to define sub-groups based on style and content. With numerical considerations seemingly secondary to aesthetics, none of the magic squares were mathematically competent. Tuareg *gri gri* plaques also carry magic square designs, but seem to contain mainly Tifinagh letters. A distinct set of rings also carry Tifinagh-based magic squares; recently-made items of this type may be “Tifinagh alphabet” souvenirs made for tourists. Cryptic apotropaic rings are also found in East Africa. In Ethiopia, especially among the Oromo in the southwestern highland district of Jimma, smiths inscribe white-metal or silver rings with talismanic symbols. The former are just convex circular bands of hard alloy into which glyphs are stamped using simple punch tools. Being softer, silver rings may instead bear symbols incised by scratching or engraving. For either material, the symbols are typically arranged evenly around the ring band; there are usually two circular series, and sometimes the symbols of the upper circle are a reflection (through the ring’s equator) of those in the lower. The Ethiopian symbol repertoire appears to be drawn from Eastern Arabic and possibly Devanagari numbers; Arabic letters; the Islamic Seven Seals; and unique symbols that resist identification. Most Ethiopian rings combine numerical and non-numerical symbols, and reflections and rotations of characters are common. As one might expect from this makeup, there is a significant overlap with the symbol repertoire of Tuareg rings. The most extreme similarities occur in the small subset of Tuareg and Ethiopian rings that carry complete sets of the Islamic Seven Seals.

Mali



Ethiopia



Introduction

In terms of silver jewelry, there are some unexpected similarities between the output of Tuareg metalworkers in Saharan and Sahelian West Africa (predominantly in Mali and Niger) and the artisans of Ethiopia, a sub-Saharan country in East Africa. For example, both make rings that serve as tokens of alliance – engagement and marriage – in their respective societies.¹ In addition, both Tuareg and Ethiopian silversmiths produce a dazzling selection of crosses, which (respectively) embody variations on an indigenous archetype and the emblem of Christianity. While known collectively to Westerners as the Cross of Agadez² or the Southern Cross,³ each design of Tuareg cross (*talkhakim*)⁴ is distinctive of a known location. Traditionally, there are considered to be twenty-one discrete patterns; the inventory includes designs from Ifrouane, Air, Ingall, Abalak and Agadez itself.⁵ Nowadays, it seems that such crosses are mostly worn by women.⁶ For their part, most Ethiopian crosses consist of intricate Coptic designs and usually incorporate complex latticework. Over the centuries, many different styles evolved, and each design came to be identified with the region of Ethiopia in which it developed. Today, at least twenty-seven styles are recognised and are named for towns or provinces of the highlands;⁷ some of the most popular designs are the Axum cross, Lalibella cross, Gondar cross, and the Shewa cross.⁸

The focus of this paper is not the Tuareg and Ethiopian crosses, however, but a much less well-studied phenomenon: the curative and apotropaic use, by some members of both communities, of silver jewelry inscribed with cryptic symbols.⁹ These talismans – which often take the form of finger-rings – are believed to confer protection upon the wearer, curing their ailments and protecting them from sickness, misfortune and the evil eye. Among the Tuareg, the client may buy a plain ring from a silversmith or jeweler and then have it engraved with the appropriate designs by a *marabout*, a local or wandering holy man, who often combines the roles of Islamic teacher, healer, fortune-teller and spiritual guide. Alternatively, the *marabout* may only draw up the design and send the client to a smith, usually one known personally to the *marabout*, to have it incised on a suitable ring.¹⁰ (The latter process is analogous to a Western patient visiting the family doctor and being given a personalized medical prescription, which must then be taken to a pharmacist who dispenses the correct drugs.) Jean Gabus claims that only the *marabouts* understand how to use letter and number magic to address the specific needs of the client, and claims that the symbols are not understood by the *inaden*,¹¹ the artisans who physically make the amulets.¹² Others consider the *inaden* to be much more competent, attributing to them considerable spiritual power and symbolic knowledge.^{13,14,15} At least some Timbuktu *inaden* seem happy to proceed without any instruction from a *marabout*.¹⁶ The perspective of a Tuareg *marabout* in Agadez is provided in Appendix 1.

In Ethiopia, especially among the Oromo in the southwestern highland district of Jimma, smiths inscribe white-metal or silver (or, infrequently, brass) rings with strings of talismanic symbols.^{17,18} Other informants nominate northern Ethiopia as a source of such rings,¹⁹ including the northeastern highland region of Wollo (Welo), which also has an Oromo population.^{20,21} In either case, the Arabic character of the symbols (discussed below) or the presence of star-and-crescent motifs suggests that the rings are made for an

Islamic clientele. In the 1930s, the city of Jimma was promoted by the Italian colonial regime as a centre of Islamic learning;²² in 2007, 39% of its population were Muslim. About 48% of the Oromo are Muslim, but – as for the Tuareg – pre-Islamic religious practices and rituals commonly persist within this group.²³ Angela Fisher observes that Oromo subgroups wear jewelry that is inexpensive and that “although [...] now officially Muslim, much of their jewellery has a protective function associated with traditional pagan beliefs.”²⁴ Although there appears to be no literature on the process of commissioning an Ethiopian talismanic ring, one may reasonably assume that it overlaps with the Tuareg procedure to some extent.

Susan Rasmussen has highlighted many similarities in the roles of metalworkers in Tuareg and Ethiopian societies, including the way that their compatriots perceive them with a mixture of admiration and contempt. In both societies, the artisan “caste” defines itself as originating from outside the community. Its members are likely to practice ritual specialisms (e.g., healing) in addition to smithing; they often cultivate client-patron relations with higher-status groups; and they believe that they possess power (called *tezma* by the Tuareg and *qalb* by the dominant Ethiopian culture group, the Amhara) which can be used either for good or for evil.²⁵ The fact that they are believed by others to possess such power results in artisans being simultaneously valued and feared by the rest of the population. The Amhara, who are predominantly Christian, regard artisans as *buda* or “evil eye” people, and perceive them even more negatively than Tuareg nobles view the *inaden*.^{26,27} Some Ethiopian magic scrolls prepared by *dabtaras* – the Christian equivalents of the Muslim *marabouts* – show King Solomon fighting against “demon-blacksmith kings,” whose names (Mazhab, Shamhurish, Barqan and Maymun) identify them as kings of the *jinn*,²⁸ a powerful class of Islamic spirits made from fire.²⁹ Back in western Africa, Tuareg cosmology also identifies the *inaden* with the *jinn*.³⁰ The alien and exclusive status of Tuareg smiths is intensified by their ability to converse in a private jargon or *argot*,³¹ even though its use is no longer widespread.³² In both Tuareg and Ethiopian society, the artisan/smith group typically finds itself stigmatized and marginalized in terms of land ownership and social freedom; artisan families tend to live in proximity to one another on land owned by others, and their members marry within the group.³³

Classification of inscribed Tuareg/Berber silver talismans

The Berbers of North Africa, among whom the Tuareg feature prominently, use inscribed silver jewelry – most notably, rings, pendants and *gri gri* plaques – as talismans. The metal is either a nickel-silver alloy or a low-grade silver containing approximately 17% copper, originally “coin silver” from melted-down Marie Theresa thalers.³⁴ These mixtures are both more hard-wearing and less shiny than high-grade silver, whose ability to reflect sunlight is problematic to desert nomads who prefer not to advertise their location.³⁵ Tuareg rings present flat or curved frontal faces which are inscribed directly with a linear symbol string (“cipher”) or, more commonly, carry a “magic square” design (Fig. 1).³⁶ The ring faces of this latter category are often strikingly large. Sometimes a Tuareg ring face carries a non-rectangular pattern, such as an X partitioning the inscribed area into four triangular quadrants (Fig. 2a), or lacks formal boundary lines altogether.

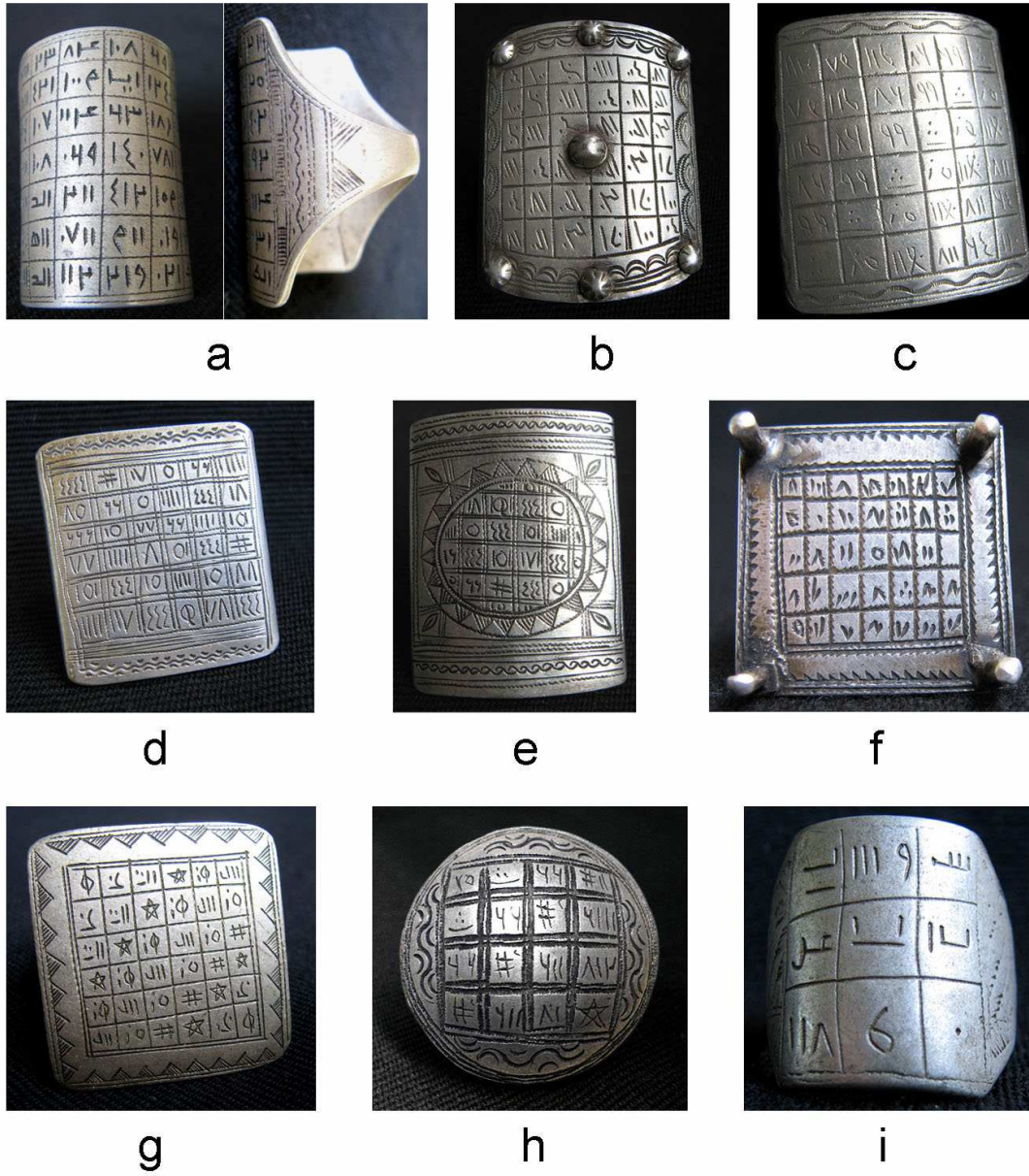


Fig. 1. Tuareg rings with magic squares. Item numbers refer to Appendix 2, length measurements to height of face. **(a)** Shield ring with number-based square (item 52, 35 mm); the right-hand panel shows a side view. **(b)** Studded shield ring, primarily number-based square, italic script (item 47, 42 mm). **(c)** Primarily number-based square, non-italic script (item 65, 40 mm). **(d)** Primarily Tifinagh-like numerals (item 58, 31 mm).³⁷ **(e)** Tifinagh-like numerals in a “sun” roundel (item 7, 39 mm). **(f)** Saddle ring³⁸ with square containing primarily Tifinagh-like numerals (item 57, 23 mm). **(g)** Pentagram-containing square (item 2, 40 mm).³⁹ **(h)** Hollow dome ring with pentagram-containing square (item 8, 38 mm). **(i)** Square with primarily idiosyncratic symbols (item 38, 23 mm). Diagonal symmetry is present in (b), (c), (g) & (h).



a



b

Fig. 2. Tuareg rings with non-magic square patterns. Item numbers refer to Appendix 2, length measurements to height of face. **(a)** Item 63, 11 mm. **(b)** Item 13, 36 mm. The main Kufic text inscriptions are translated later in the text (see *The Seven Seals as a series*).

Occasionally we encounter a mixed design, e.g. a magic square truncated at its diagonal, with a linear cipher or large pentagram filling the other half of the area.

Rectangular *gri gri* or *gris gris* amulets, whose exterior (or at least backing) is made of leather, are worn by Tuareg for protection. Like the better-known *tcherot*,⁴⁰ with which they overlap in terms of function and design, *gri gri* are usually suspended from a neck-cord. Many display an inscribed metal plaque, usually made of silver, or reveal one when opened.

Throughout this paper, “magic square” will be used in its broadest sense to indicate a rectangular grid of arrayed symbols, whether or not the symbols carry numerical values. Likewise, “inscribed” and related terms should be taken to include indirect methods of mark-making, such as casting by the lost wax (*cire perdue*) technique.⁴¹ In the same vein, “Tifinagh” will be used as a catch-all term for the script(s) used to write Amazigh languages, including the ancient, classical, transitional and modern forms of Berber, Libyco-Berber and Tifinagh. The importance of both cultural constructs – that is, magic squares and Tifinagh script – to the Tuareg has been explored by Gabriella Scelta. She has proposed that the physical layout of traditional Tuareg tents protects their occupants by placing them within a magic square, with the Tifinagh inscriptions on the tent poles potentially populating the cells of the imaginary grid.⁴² Although Scelta speculates that Tifinagh letters may have associated numerical values, there appears to be no widespread recognition of this; moreover, the script lacks any characters that serve explicitly as numerals.⁴³

The survey

The raw data for this survey consisted of talismanic silver Tuareg/Berber jewelry items with inscribed symbol strings that were viewable (i.e., published or offered for sale) online between 2009 and 2014. From the digital photographs, I attempted a systematic analysis of the symbol content of the items, which numbered 132 in total. First, symbols in the repertoire were grouped into eleven different types (types A-K, defined in Table 1) and then each ring, pendant or plaque was scored according to the symbol types present, which were ordered from most to least prevalent/noticeable. This led to item descriptors such as BAGC and EDGCB. The items were divided into seven major categories, each of which was primarily defined by the first letter of the item descriptor, and then sorted alphabetically according to the subsequent letters. Where appropriate, substantial subdivisions within each category were recognised and labeled (e.g. category 5A, 5B, 5C). Additional features of interest were also recorded for the items. The complete survey is available in Appendix 2, and a high-level summary of its properties is presented in Table 2.

Table 1. Symbol types in the Tuareg/Berber repertoire

Type	Each type includes rotations and reflections of its stock symbols
A	Tifinagh-like characters serving/posing as Arabic numbers (e.g. , , , ^, v, O, φ)*
B	Arabic or Perso-Arabic numbers, other than type A
C	Arabic letters
D	#
E	Pentagram or hexagram
F	Tifinagh and Tifinagh-like symbols, other than type A or D
G	Arabic-like characters, perhaps compounded with dots (but not forming standard Arabic letters or numbers)
H	Arabic words
I	Possible origin in Kufic text
J	Pictograms
K	Other

* “φ” denotes a cleft circle resembling an exaggerated Perso-Arabic numeral 5 (٥) or the initial/medial form of the Arabic letter *hāʾ* (هـ), also with numerical value 5 (Fig. 3, Section I). Although the circle “O” resembles a large version of the standard Arabic number 5 (٥), this number may already be represented by φ, and the circle also resembles the Western zero (0). See the discussion of these points in the main text.

Table 2. Summary for silver Tuareg/Berber jewelry catalogued in Appendix 2^a

Item total	Grids only ^b				All			
	Max cells	Min cells	Diag sym %	Num dots %	Symbol range start ^c	Symbol range end ^c	Non-grid %	Non-ring %
1. Tifinagh-like numerical								
30	81	9	7	33	AB	AGDB	0	0
2. Normal numerical								
<i>2A. Many or all italics (i.e., slanted script)</i>								
7	63	30	71	100	BAG	BGA	0	0
<i>2B. Few or no italics</i>								
38	64	9	37	47	B	BHGA	21	0
3. Pentagram-containing grid or associated symbol set								
<i>3A. With pentagram</i>								
6	36	9	83	17	EDBAG	EDGCB	-	0
<i>3B. Without pentagram</i>								
4	36	25	100	75	BDAC	BDGA	-	0
4. Pentagram or hexagram present but not part of grid								
5	88	64	20	40	EAB	EBGAC	60	0
5. Tifinagh letter-containing								
<i>5A. Tifinagh or Tifinagh-like letters, sometimes with numbers</i>								
7	36	9	0	14	F	FG	57	86
<i>5B. Tifinagh alphabet rings</i>								
8	25	4	0	0	F	FD	0	-
<i>5C. Gri gri and gri gri-like</i>								
14	30	6	0	0	F	FIG	0	79
6. Idiosyncratic								
9	25	9	0	22	G	GCB	33	22
7. Arabic words								
4	9	9	0	25	H	HJ	75	0

^a The grand total is 132 items.

^b Diag sym = diagonal symmetry; Num dots = numerical(-like) use of dots.

^c Symbol types (A-K) are defined in Table 1.

Interesting insights can be obtained by examining the sub-categories that emerged for the jewelry items, and by considering in detail the characters in each symbol type, the contexts in which they appear, and the propensity for certain ones to co-appear or be mutually exclusive. Some of these observations will now be presented and discussed.

Observations from the survey

- Ring inscriptions are usually on the face, engraved directly into the silver. This contrasts with antique or vintage Islamic rings from the Middle East, where talismanic designs are usually engraved into a central flat gemstone or gold inlay, or inscribed on the flat silver shank and around the bezel, or both. Tuareg rings do not usually carry talismanic inscriptions on their shanks.
- The Tuareg/Berber symbol repertoire appears to be drawn from overlapping categories that include Eastern Arabic⁴⁴ and Perso-Arabic numerals⁴⁵ and possibly Western digits and Indian Devanagari numbers as well; Arabic letters; Tifinagh characters; and the Islamic Seven Seals (the *ism al-a‘zam* or Greatest Name).^{46,47,48,49} Some distinctive symbols are presented in Fig. 3. The Seven Seals are considered in their own right near the end of this paper (see *Individual glyphs* and *The Seven Seals as a series*).
- About 90% of jewelry items contained a mixture of symbol types, and none were found to carry identical designs.
- Reflections and rotations of individual glyphs are common. This agrees with Tewfik Canaan’s assessment that the inversion of Arabic letters and numbers is widely encountered in Islamic talismans.⁵⁰ In an apparent extension of this practice beyond metalwork, Tuareg *inaden* sometimes brand their livestock with “a modified, ‘twisted,’ (inverted or reversed) version of the brand on the[ir patron] nobles’ livestock.”⁵¹ Culturally, “[Tuareg] smiths are supposed to enact reversals and inversions.”⁵²
- Some of the type C (Arabic letter) symbols also appear in magic squares on antique/vintage Islamic rings from the Middle East, although there they mainly occur in letter-only squares, which are presented separately from number-only squares. Exceptions do occur, as exemplified by Fig. 4a, but even there the letters form their own row, spelling out a word at the top of the square. Squares of this design are common in the *Shams al-ma‘ārif al-kubrā*, an influential grimoire of Islamic magic attributed to Aḥmad al-Būnī.⁵³ The wholesale mixing of letter- and number-like and other characters within a magic square seems to be very much a Tuareg/Berber characteristic, as is the rectilinear influence of Tifinagh on the symbol repertoire.
- A Tuareg ring bearing a linear cipher (rather than a magic square design) typically contains 3-4 lines of symbols on its faceplate. The characters are usually dominated by Eastern Arabic numbers, but some Arabic letters or number/letter-like symbols are usually present too, along with more pictographic elements. Rings with a small inscribable area often belong to this group, as substantial space is required to accommodate anything larger than a 3 x 3 magic square.
- Numerical or numerical-looking designs provide the most popular categories of magic square (Categories 1 & 2), but none of the magic squares in the survey seemed to be mathematically competent (using *abjad* number values for letters, if

alphabet rings: Typical Tifinagh or Tifinagh-like elements from this type of ring. Other letters of the Tifinagh alphabet (not shown) may be also be present, as may augmentation with Arabic letters, numbers, and/or symbols from the Type A and C repertoire. Tuareg gri gri plaques: Most symbols on Tuareg *gri gri* are Tifinagh letters or compounds, reflections and/or rotations thereof. Occasionally these are augmented by other symbols from the Type A and C repertoire. Some *gri gri* symbols that seem to have escaped inclusion in this definition are shown here. **Section III.** Possible Arabic (black) or Hebrew (plum) letter prototypes. The Hebrew letter under the fifth symbol is an *alef* in Rashi script.

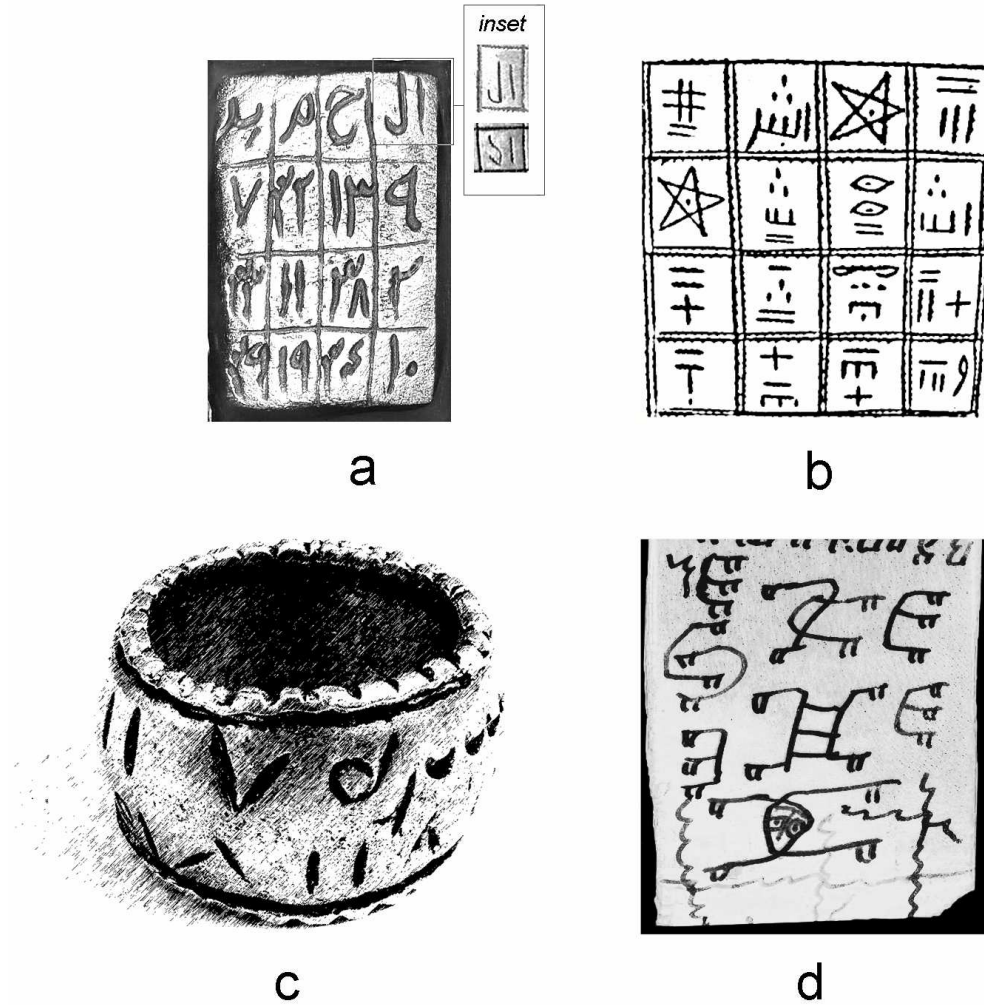


Fig. 4. Counter-examples, anomalies and non-metal items. (a) Engraved gemstone face on an antique Islamic ring from the Middle East (probably the Persian Gulf region). Letters form the top row and spell out *al-hamīd* (The Praiseworthy), one of the “Beautiful Names of Allāh.”⁵⁶ Note the resemblance of the top right-hand cell (letters forming the definite article, *al-*) to cells on Tuareg rings 2 (central diagonal, Fig. 1g) and 47 (diagonal one below centre, Fig. 1b); some Tuareg grids even have cells with just this symbol pair (*inset*, taken from items 45 and 111). (b) Design on a Tuareg *gri gri* plaque. In the magic square, the pentagram co-appears with ||, a combination not seen in Tuareg/Berber rings. (c) Sketch of an Ethiopian-like ring claimed to be of Tuareg origin and sourced in Mali. (d) End of an Ethiopian Christian magic scroll, vellum, probably 20th century CE.

present). Numerical considerations are now seemingly secondary to aesthetics; see the discussion of diagonal symmetry below.

- A *gri gri* plaque typically carries a magic square design which contains only Tifinagh (or Tifinagh-like) symbols. Such plaques serve a genuine apotropaic function among the Tuareg. Some *gri gri* plaques carry quite complex inscriptions in the magic square, with several characters (a word?) inscribed in each cell.
- A distinct set of Tuareg rings (Category 5B), most of them recently made, carry magic square designs populated with Tifinagh letters. Although the designs are unique, newly-made rings of this type may be “Tifinagh alphabet” souvenirs aimed primarily at tourists. The older ones are probably close relatives of the *gri gri* plaques, and thus genuine tribal talismans. The alphabet rings are typically simpler in design than *gri gri* plaques, usually having only one letter per cell.
- Pendants (which include circular and square necklace centerpieces, ear-rings, *hamsa* pieces for suspension, and so on) seem to be more common than rings in west Saharan/Sahelian countries other than Mali and Niger, such as Morocco, and probably derive from Berber groups other than the Tuareg. Pendants are usually focused on Tifinagh(-like) letters. Some are adorned with linear, spiral or disorganized sets of symbols which appear highly talismanic;⁵⁷ others have magic square designs, which in some cases resemble those on mainstream Tuareg rings and in others resemble *gri gri* plaques.
- The symbol content of the magic square on some pendants is very mixed. For example, there is a type of cleanly-struck or cleanly-cast Berber “teardrop pendant” that combines Tifinagh with other symbols, namely spirals, Tifinagh-like numbers (e.g., |||, |·, V), glyphs of possible Hebrew origin, etc. (Fig. 5 and Fig. 3, Section III).⁵⁸
- There are at least two variants for each of the Arabic numbers 4 and 5. For the former number, the Perso-Arabic symbol (Fig. 3, Section I) sometimes appears alongside or instead of the Eastern Arabic ٤, and the symbol ٥ (if not representing the ligature *lā*) may be the Indian Devanagari form of 4 or the inversion of a variant split-*hā*’, with numerical value 5 (Fig. 3, Section I).
- In symbol type A (Table 1, including footnote), the large circle “O” resembles a large version of the standard Arabic number 5 (٥), but it also resembles the Western zero (0). It seems that its numerical value, if indeed it has one, may depend upon context. For example, if φ – the cleft circle resembling a split-*hā*’ (value 5) or Perso-Arabic numeral 5 – or a small circle “o” is also present, then presumably one of these serves as 5, and · or O may serve as zero. The · may not signify zero as it often precedes the other digits in the number (e.g., ring 129), which would be mathematically redundant. Unusually, ring 50 contains a combination of φ, o and ·, and rings 66 and 126 contain a combination of φ, O and ·.
- To complicate matters further, we should note that φ (a type A symbol) can also be interpreted as the sixth glyph in the Islamic Seven Seals. Patterns dominated by type A symbols often contain # (type D) as well, i.e. the symbol of the fourth Seal.

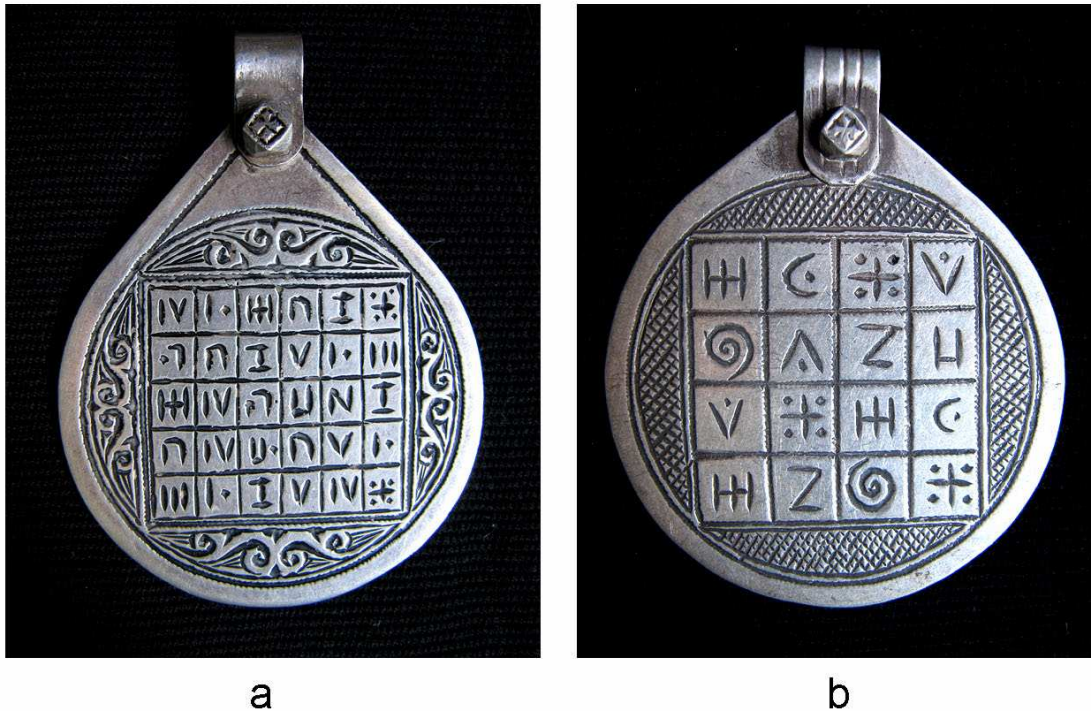


Fig. 5. Berber teardrop pendants. Item numbers refer to Appendix 2, length measurements to maximum width. **(a)** Item 43, 48 mm. **(b)** Item 64, 51mm.⁵⁹

In fact, 43% of Category 1 designs carry # symbols, and 79% of those contain one or more φ signs.

- To continue this theme, we note that signs resembling the second and fifth Seals (||| and ||||, respectively) occur within the type A symbol repertoire and are often encountered on items with a high type A content. Accordingly, items rich in symbol types A and D are likely to contain up to four of the seven Seal symbols (namely, the second, fourth, fifth and sixth); such co-appearance adds weight to the idea that the origins of these symbols lies in the Seven Seals.
- The previous two points prompt us to look for other distinctive Seal symbols, such as the pentagram that commences the standard Seal series. Pentagrams (type E, Table 1) are found in Tuareg magic square designs and show an apparent requirement for # (type D) to be present, consolidating the idea that these symbols' origins lie in the Seals. Although (as mentioned) we often find the symbol # (type D) in rings dominated by type A, in-grid pentagrams are seldom present in Tuareg rings with a high type A content. Instead, they favor rings with a combination of types G, C and B, although that combination of symbol types does not guarantee their presence (see Appendix 2, Category 3B).
- As an extension to the previous point, we can say that it would be very unusual for a pentagram (type E; first Seal) and ||| or |||| (type A; second and fifth Seals) to co-appear in a Tuareg grid. No exceptions to this rule were encountered among

the rings in the survey, although two (items 8 and 130) came close by containing both a pentagram and a four-digit number containing three sequential ones (e.g., ١١١٢ for item 8). Accordingly, no ring grid contains five or more of the seven Seal symbols (except for the rare instances formed purely from the Seven Seals series, which were omitted from the survey and are dealt with separately near the end of the paper). One instance of co-appearance of the pentagram with ||| (and, for that matter, with #) was noted among the *gri gri* plaques (Fig. 4b), which may not be constrained by the same restriction as the rings. Here the multi-stroke symbols seem to be serving directly as Seal symbols (as identified by retention of the horizontal over-bar above |||) or as parts of Tifinagh words, and lack the (pseudo-)numerical connotations that they do in ring-borne magic squares.⁶⁰

- The remaining Seven Seals characters, the maimed-*mīm* (third Seal) and inverted-*wāw* (seventh Seal), do not seem to be an explicit part of the Tuareg/Berber magic square character repertoire. If present, they would fall into symbol types C or G. Symbols of similar shapes do sometimes appear, but it is usually easier to see these as relating to the Arabic/Western number 9 and Western number 6, respectively (types B or G). The latter may equally be an inverted Arabic number 9, an old form of the numeral that is often encountered in Islamic talismans.⁶¹
- The magic squares sometimes display complete or partial symmetry, with rows progressively offset by a single cell and, in consequence, with diagonals containing repeats of a single symbol. This generates an aesthetically pleasing pattern. Of the 31 items with perfect or near-perfect symmetry, all but 4 (i.e., 87%) have the central same-symbol diagonal running from top right to lower left.
- Category 3 rings (i.e., pentagram-containing grids or associated symbol sets) typically show diagonal symmetry (90% compliance, pink fill in Appendix 2) and have a strong preference (70%) for the 6 x 6 format (green fill). Italic type BAG(X) rings, where X can be any symbol type(s) or no symbol, also typically show diagonal symmetry (100% compliance, cyan fill) and have a similar preference (75%) for the 6 x 6 format (olive fill). Symmetry can be partial when the gridlines are not evenly spaced, because additional characters may be added to fill up space in larger cells and/or some expected characters may have to be omitted from smaller cells. It appears that aesthetics take priority over the consistency of cell contents as well as over mathematical competence.
- All italic rings (blue fill in Appendix 2), 75% of type ABG(X) + AD(X) + AG(X) items (tan fill), and 64% of type BG(X) magic square rings (mauve fill) carry numerical dots.
- An unusual “clothes-iron”-shaped symbol (type G) is found on rings 44 and 126 (Fig. 3, Section I, Other, top line far right). A somewhat similar symbol (also shown, for comparison, in Fig. 3) appears several times in two siltstone Kufic amulets held by the Petrie Museum at University College London.⁶² As with other characters on these amulets, the symbol is attached to the Kufic baseline.
- A plus sign (+) with a dot in each quadrant is seen in the Berber symbol repertoire (Fig. 3, Section II, top line) and is very much a Tifinagh-like element (Appendix 2, type F). Despite the presence of component elements

and closely related signs (+ , : : , ÷ , ·|· etc.) in Tifinagh and Libyco-Berber alphabets, they do not seem to contain an exact match. The closely-related *asteriskos* or cross-with-four-dots symbol (✕) has prehistoric roots, and originally served as a fertility token.^{63,64} In agricultural societies, it may have denoted “planting in all four directions.”⁶⁵ The *asteriskos* is found also in the Greek magical papyri, a collection of 2nd century BCE – 5th century CE documents from Egypt.⁶⁶ While it seems to function there mainly as an editorial or critical sign,⁶⁷ its recurring presence among magical symbols would have made it an easy recruit to the talismanic symbol repertoire. It is actually the main feature on a published Moroccan ring.⁶⁸ One notable use in more recent centuries is its occurrence in an alternative form of the Islamic Seven Seals/Greatest Name,⁶⁹ whose normative counterpart has been mentioned above.

Possible links with other cultures

Some Tifinagh-like characters that serve or pose as Arabic numbers (e.g., ||, |||, |||| and V) can be interpreted not only as Arabic numbers (with values in the examples of 11, 111, 1111 and 7, respectively) but also as Roman numerals (with values of 2, 3, 4 and 5, respectively). Roman influence is not beyond the bounds of possibility. In the Maghreb, the Roman Republic established the province of Africa in the 2nd century BCE and eventually controlled the entire Mediterranean coast of the continent. The Berbers were pushed southwards, returning only after the eclipse of Roman control by the Vandals in the 5th century CE. Alternatively, or additionally, such symbols could be derived from Greek letters; sequences such as || ΛV|, found on Abrasax gems of the 3rd-4th century CE, have been interpreted in this way.⁷⁰

Some symbols in the Tuareg/Berber repertoire appear to have counterparts in the pictographic symbol systems of the Dogon and Bamana/Bambara peoples (Fig. 6), who are concentrated in central and southern Mali, respectively.⁷¹ Both groups use their symbol-sets in connection with divination, amongst other things; embodiments range from sand-drawings to incised decorations on wooden door-locks.⁷² Among the Dogon, only ritual specialists are able to read the signs. In contrast, the Bamana pictograms – *tiw* symbols, which carry mythological and cosmogonic significance – are almost universally understood within Bamana society.⁷³ Each glyph usually has a range of thematically linked interpretations, with the emphasis on one meaning or another changing with district. Some of the secondary meanings may only be known to ritual leaders.⁷⁴ The legend to Fig. 6 shows symbols similar to those in the Tuareg/Berber repertoire and provides the interpretations associated with them. As many distinctive signs in the Dogon and Bamana symbol systems do not have Tuareg/Berber counterparts, and as none of the Dogon/Bamana symbols are displayed on jewelry or portable talismans as ciphers or magic squares, it seems safer to assume that the correspondences in Fig. 6 are largely coincidental, and just reflect the inevitable similarities between simple “runic” symbols.

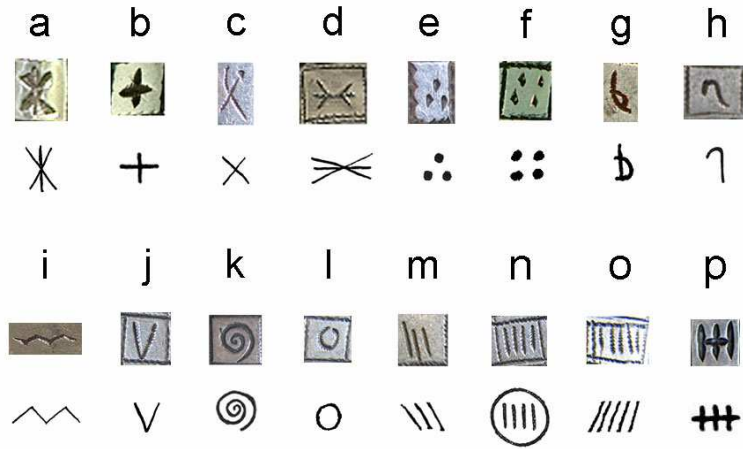


Fig. 6. Overlap of the Tuareg/Berber repertoire with Bamana/Bambara *tiw* symbols and Dogon divination pictograms. Interpretations of the lower symbol in each pairing are as follows;⁷⁵ *Ba* = Bamana, *Do* = Dogon. **(a)** *Ba* & *Do*: the world or universe. **(b)** *Ba*: the four cardinal points. **(c)** *Ba*: fertility, the four cardinal angles, man, the universe, travels of the creator-ancestor/god Pemba. **(d)** *Ba*: sickness or death. **(e)** *Do*: each point represents a stone given to humanity by Nommo as a token of alliance. **(f)** *Do*: jackal, quadruped. **(g)** *Ba*: number with value 150. **(h)** *Do*: ancestral iron hoe. **(i)** *Ba*: cosmic travels of three creator-ancestors; the celestial trajectory of Venus; the sun's annual path, the year. **(j)** *Ba*: the ear, hearing, speech, a tooth. **(k)** *Do*: spinning of God as wind before self-creation. **(l)** *Do*: the sun; *Ba*: number with value 20 (in some locations, 10). **(m)** *Ba*: a man; all that Pemba entrusted to Faro, the water-god. **(n)** *Do*: the Earth; the strokes are the fingers (minus the little finger) of the creator, who used his hand to measure it.⁷⁶ **(o)** *Ba*: Pemba's divinity. **(p)** *Ba*: number with value 6.

One of the more tantalizing observations in the survey is the appearance of Hebrew-like symbols (Fig. 3, Section III) on pendants and a ring of Berber origin. The ring (Appendix 2, item 122) and probably the pendants too (Fig. 5, items 43 & 64), are from Morocco, a country which used to have a large Jewish population. In the 1940s, the number of Jews in Morocco exceeded 250,000.⁷⁷ As one might expect, many Jewish amulets of Moroccan origin have been documented.⁷⁸ Given the syncretic nature of magic and the historical interplay between Jewish magic and that of adjacent cultures,⁷⁹ it is possible that some Hebrew letters found their way from Moroccan Jewish amulets into Moroccan Berber talismans. For example, in the Atlas mountains, Jews served Berber communities as healers, diviners and artisans, and had a virtual monopoly on the making of jewelry.⁸⁰ Although the last Jewish jewelers are supposed to have left the south of Morocco forever in 1963,⁸¹ others report that Jewish silversmiths continued to ply their trade in southern towns such as Rissani as late as the 1980s.⁸²

Ancient Jewish influence within the north African tribal world is attested by the fact that a number of Berber tribes had actually converted to Judaism by the 6th century CE.^{83,84,85} It is of further interest to note that Pere de Foucauld, an early French missionary to the Kel Ahaggar Tuareg of Algeria, observed of their *inaden* that "some of them were of Israelite origin, having come from Morocco in a distant age, from ocean shores, after the Berber tribes that conquered Adagh."^{86,87} Similarly, the French ethnographer Henri Lhote

believed that many Tuareg *inaden* were descendants of the Jews of Tamentit (south central Algeria), who were exiled from Touat in 1495 in the course of the Inquisition.⁸⁸ Modern authors propagate the idea that *inaden* are supposed to have Jewish origins.^{89,90}

Classification of inscribed silver talismanic rings from Ethiopia

An inexpensive type of Ethiopian talismanic ring is made of a hard white-metal alloy and is shaped as a broad circular band with a somewhat convex external surface (Fig. 7a). The metal may be “German silver,” a hard alloy that actually contains no silver but is instead a mixture of copper (50-62%), zinc (19-17%) and nickel (30-21%). More often a low-grade coin silver (as described previously for Tuareg rings) is used, in which case the ring tends to be thick and heavy, and not so wide (Fig. 7b). Brass is also commonly used for heavy rings. While brass rings usually have minimal adornment (Fig. 7c, and see below), occasionally an example bearing a full symbol series does come to light.

With Ethiopian rings, there is often no central face, in which case the symbols are incised in a circular fashion around the entire outside of the metal band. If a central face is present, it usually carries a simple motif such as a pentagram (Fig. 7d) or a star-with-crescent-moon engraved prominently into the material of the ring,⁹¹ with any talismanic symbol strings relegated (in smaller script) to the shank.



Fig. 7. Varieties of Ethiopian ring. Upper panel, side view; lower panel, top view. Length measurements refer to internal diameter. **(a)** Hard white metal, 21 mm. **(b)** Silver, heavy, 17 mm. **(c)** Brass, heavy, 16 mm. **(d)** Silver, with face, 17 mm. The numerical cipher visible in ring (b), upper panel, is explained in the text (see *The Seven Seals as a series*).

At one extreme, thick heavy rings may have a uniform and highly convex curvature on the outside, in which case the cross-section of the outer surface is almost semi-circular (Fig. 7b). At the other extreme, they may have an external surface formed from two outward slopes that meet at the ring's equator, so that the cross-section is almost triangular (Fig. 7c). Heavy silver rings are usually wedding rings.⁹² In Ethiopia, there is a tradition of wearing thick/heavy rings as pendants, since they are usually too bulky (and the central hole too small) to allow them to be worn on a finger. A suspension cord is threaded through the centre of the ring and tied around the neck; over time, rings worn in this manner develop a groove at the point of suspension, where the metal can wear remarkably thin.

The survey and observations from it

The raw data for this survey consisted of talismanic Ethiopian rings with inscribed symbol strings that were viewable (i.e., published or offered for sale) online between 2009 and 2014. Rings with just one symbol or motif, whether alone or repeated, were excluded. The total number of items amounted to 20; of these, 12 were silver, 7 were white metal and 1 was brass. As the number of items was small and the talismanic inscriptions were much less diverse than in the Tuareg/Berber survey, a systematic analysis along the lines of Appendix 2 was not necessary.

Two of the rings (both silver) form part of a public museum collection, that of the Musée d'Ethnographie de Genève in Switzerland.⁹³ They were sourced from Jimma and are ascribed to the Oromo people.

- Like Tuareg rings, Ethiopian talismanic rings are distinct from their conventional Islamic counterparts in the Middle East in that they lack a central bezel into which an inscribed gemstone or precious metal inlay has been set. Ethiopian talismanic rings typically carry their ciphers as circular series of symbols distributed evenly (i.e., with approximately equal spacing) around the ring band. Some antique or vintage Islamic rings from the Middle East bear talismanic designs on their shanks as well as on their gemstone/inlay faces, but such inscriptions usually involve smaller and more complex script (which is often difficult to read) relative to the bold symbol series that encircle Ethiopian bands.
- Glyphs are stamped into the hard alloy rings using linear and semi-circular punch tools. Fig. 8 illustrates how just a few punch-tool elements can be used to build up a talismanic symbol repertoire whose elegance belies the inherent simplicity of the technique.
- Being softer, silver rings may bear symbols incised by scratching or engraving rather than punching.
- Band and shank inscriptions on Ethiopian rings usually take the form of two circular series, sometimes identical or almost so, in which case the symbols of the



Fig. 8. Representative symbols from Ethiopian rings. The number of punch-strikes required is indicated at the left of each row of symbols. Rotations, reflections, etc. of symbols are common but have here been omitted for clarity. The “three-ring pyramid” motif (at *) in the 3-strikes line mainly appears on rings that lack other symbols. Characters that appear only in complete series of the Seven Seals are not included in this figure.

- upper circle may be a reflection (through the ring’s equator) of those in the lower (Fig. 9).
- The Ethiopian symbol repertoire appears to be drawn from Eastern Arabic and possibly Devanagari numbers; a limited range of Arabic letters; the Islamic Seven Seals; and symbols that resist identification. Members of this last group appear to be distinctively Ethiopian and are not shared by Tuareg/Berber or Middle Eastern rings.
- The symbols on Ethiopian rings can be categorized in terms of the number of punch-tool strikes required to complete each glyph. Common symbols are classified in this manner in Fig. 8.
- As with the Tuareg/Berber rings, reflections and rotations of individual glyphs are common.
- Also as with the Tuareg/Berber rings, Ethiopian rings contain a mixture of symbol types, and no two were found to carry identical designs. Some representative symbol strings are shown in Fig. 10.
- As with the Tuareg/Berber magic square designs, the third and seventh of the Seven Seals do not seem to be an explicit part of the Ethiopian symbol repertoire,

except as part of an intact Seal series (a special circumstance, considered below in *The Seven Seals as a series*).

Possible links with other cultures

Heavy but plain brass and silver rings identical in shape to Ethiopian ones are attributed to the Fulani, and again are worn as pendants. The Fulani are a widely dispersed and partly nomadic group whose highest concentration is in West African countries, especially Nigeria. Their distribution extends to Egypt and Sudan, but not to Ethiopia.⁹⁴ The Fulani have a significant presence in Mali, where some of their talismanic silver

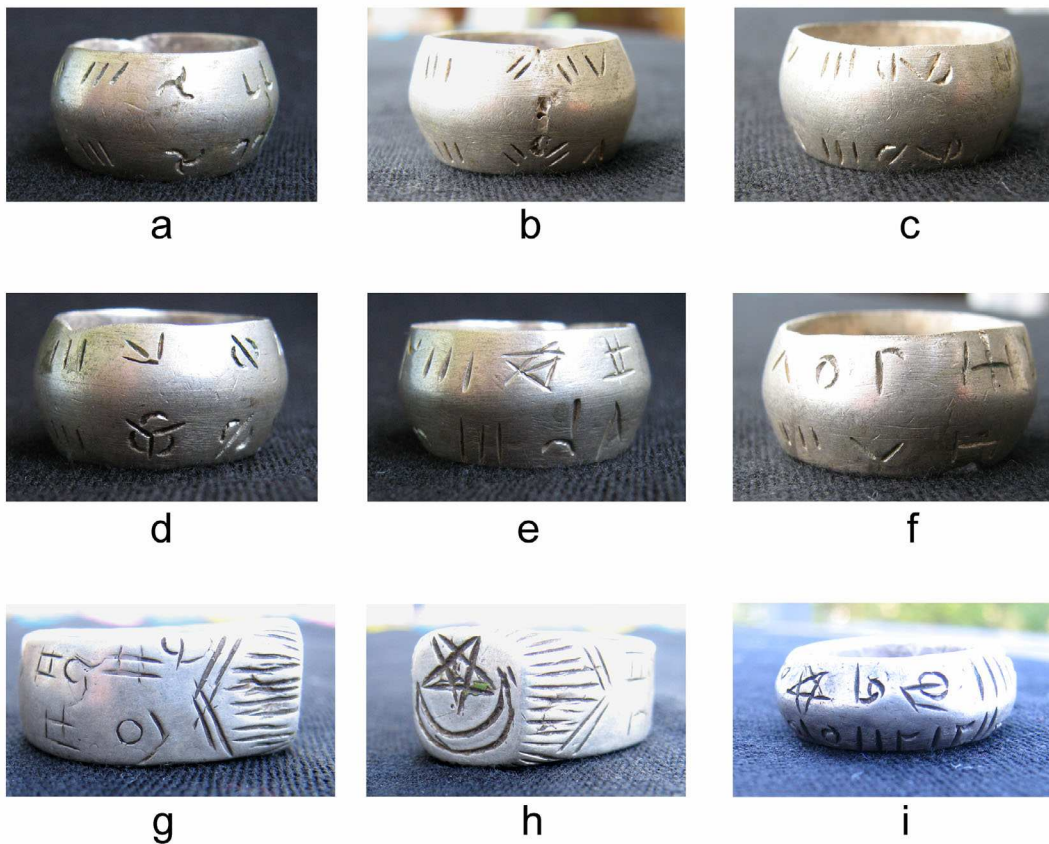


Fig. 9. Symmetry in inscriptions on Ethiopian rings. (a) Perfect reflection. **(b)** Perfect reflection. **(c)** Near-perfect reflection. **(d)** Perfect reflection but for one anomalous symbol. **(e)** Independent inscriptions. **(f)** Independent inscriptions. **(g)** Complexity on shank of flat-faced ring. **(h)** Islamic insignia (star and crescent) on flat face of previous ring. **(i)** Islamic insignia (end of the Seven Seals series) on ring shown in Fig. 7b. Rings in panels (a)-(f) are hard metal, those in (g)-(i) are silver. Except for (a)/(d) and (g)/(h), each image shows a different ring.



Fig. 10. Representative symbol strings from Ethiopian rings. In these double-circle inscriptions, the orientation selected for the ring is necessarily arbitrary, as is the start/finish point selected for the symbol series in rings without frontal faces (panels a-e). The first five examples are from hard metal rings, where (a) is from that shown in Fig. 9a,d, (b) from Fig. 9b, (c) from Fig. 9c, (d) from Fig. 9f, (e) from Fig. 9e. Example (f) is from the silver ring shown in Fig. 9g,h.

jewelry carries linear ciphers and magic square designs that are almost indistinguishable from their Tuareg equivalents.^{95,96} Like their Ethiopian counterparts, some heavy Fulani rings carry simple punched-circle motifs.⁹⁷

Some silver pendants from Ottoman Turkey (Fig. 11) carry talismanic designs that have elements in common with the Ethiopian rings. Small deep circles are abundant in the designs, as they sometimes are on heavy Ethiopian and Fulani rings. In the Ottoman pendants, the same round symbol seems to be used for the Eastern Arabic number 5 (°),



Fig. 11. Ottoman Turkish teardrop pendants. The talismanic motifs are hammered into thin silver sheets. Maximum width in both cases is 37 mm.

since it appears in compounds with other Arabic numbers (e.g., with ξ in Fig. 11a). As with the African talismans, the designs mix numbers, letter-like symbols (such as the ح -like symbol high in Fig. 11a) and non-number/non-letter symbols, and reflections and rotations of standard characters are common. There is a strong sense of symmetry in Fig. 11a, with an axis of reflection that runs vertically down the centre of the pendant, just as in some Ethiopian rings the two circular scripts are reflections of one another. The pendant in Fig. 11b seems more pictorial, but contains some stylized Arabic text or pseudo-text. Other pendants of a teardrop shape from the same locale (not shown) carry linear ciphers rather than diagrammatic designs, and thus have content not unlike that on the face of a Tuareg cipher ring. The symbols are a mixture of numbers (Arabic and Western), letters (Arabic and Western) and unusual characters (different to those in the African talismans).

Given the distances involved, a direct connection between the Turkish pendants and the Ethiopian or Tuareg/Berber talismans is unlikely. Some of the similarities result from the fact the Ethiopian rings and Ottoman pendants are both inscribed using a small range of punch tools, with most symbols requiring multiple punch strikes. Geometric glyphs – especially rectilinear ones – are easier to form than complex curvilinear shapes. Beyond this, one may conjecture that all three groups preserve archaic design concepts from the magical practices of Late Antiquity and include symbols derived from those in early

repertoires.⁹⁸ The possibility of a more immediate connection between Tuareg/Berber talismans and the Ethiopian rings is reprised in a later section (see *Relationship between East and West African items*).

Legibility: the chemistry of contrast

The punched symbols on the Ottoman pendants (Fig. 11) appear to have been darkened by the application of a glossy black pigment, a process noticeably more complete in Fig. 11a than in Fig. 11b. A similar pigment seems to have been used to enhance the contrast in the Berber pendant shown in Fig. 5a, and one can see places where flakes of this “paint” have been lost. The symbols on the other Berber pendant (Fig. 5b) and on the great majority of Tuareg rings have also been darkened, but in this case with a matt black finish that is probably the result of a sulfide-related process. Exposure to salts such as sulfurated potash (“liver of sulfur”) darkens the surface of a silver object, and this chemical patina persists in the grooves and channels after its removal from the higher parts of the surface by polishing. Alternatively, a black mixture of metal sulfides (called niello) can be inlaid into the inscriptions and set hard by baking.

The symbols on many Ethiopian rings also seem to have been enhanced by chemical treatment, but the resulting contrast is usually less striking than in Tuareg examples. A proportion of Ethiopian hard metal rings have simply been left untreated. The contrast in some rings of this kind may improve over time as the indented metal (which is protected from rubbing) becomes tarnished and as dirt accumulates in the grooves.

Relationship between East and West African items

Ethiopian white-metal rings, and many silver ones as well, carry stamped characters built up from simple straight-line or semi-circular elements that have been applied using a few basic punch tools. In contrast, the symbols on Tuareg/Berber rings are typically not stamped but rather are incised, engraved or cast. The finer control afforded by these more sophisticated methods permits symbols of greater fluidity and complexity, and exaggerates individual variation between artisans. In addition, the online surveys suggest that Tuareg talismanic rings are more than five times as numerous as Ethiopian ones in the Western marketplace. In combination, these advantages lead to a dauntingly large range – at times, seemingly, a continuum – of glyphs in the Tuareg/Berber repertoire.

Nevertheless, some features are shared by the Tuareg/Berber and Ethiopian talismanic rings. One common characteristic is that both differ from their conventional Islamic counterparts in the Middle East by lacking a face with an inscribed gemstone or precious metal inlay. They also share a penchant for combining numerical, alphabetic and non-number/non-letter symbols in a single talismanic design, one that is not constrained by mathematics. Another general feature sometimes manifested in rings from both regions is symmetry: diagonal symmetry in Tuareg magic square rings, and a mirroring of the upper symbol circle by the lower in the Ethiopian rings. In both cases the symmetry may be imperfect, or local rather than global in extent.

An idiosyncratic quality to the artifacts under consideration should come as no surprise. Both of the African source regions are significantly removed from the centers of “normative” Islam, whether Sunni or Shia. Specifically, most of the Tuareg/Berber items originate in west African countries, a long way from the Middle East, while the people of the Ethiopian highlands “have for centuries isolated themselves from the outside world in the craggy barriers of a vast mountain massif.”⁹⁹ Accordingly, although some symbols (such as Eastern Arabic numbers) are universal, at least some of the symbols in each repertoire are likely to be indigenous to the local region. Some of the Tifinagh(-like) symbols on Tuareg/Berber jewelry can be considered intrinsic to Amazigh territory, anchored to place by the Libyco-Berber rock inscriptions of the Sahara and adjacent zones. Equally, some symbols on the east African rings are likely to be indigenous to the local population; visually appealing candidates include the triskele (Fig. 8, 3-punch symbol row, sixth image from left) and some more complex (pseudo-)symmetric motifs (Fig. 8, 5⁺-punch symbol row, third and fourth images). By way of precedent, Ethiopian highland jewelry is known to incorporate symbols first recorded in gold jewelry from Aksum in 300 CE.¹⁰⁰

Whether or not a subset of each symbol repertoire has indigenous origins, it seems safe to assert that some symbols are distinctive of the Tuareg/Berber repertoire while others are unique to the Ethiopian one. Conversely, it is equally clear that some of the non-universal symbols are shared between the two repertoires. Examples of the latter are presented as symbol pairs in Fig. 12a. In some cases, of course, the similarity in shape is only suggestive, and even some close matches could merely be the result of coincidence. However, this can hardly be the case for all such pairs. In a later subsection (*Individual*



Fig. 12. Shared Tuareg/Berber and Ethiopian symbols. (a) Distinctive symbols shared by Tuareg/Berber magic square rings or pendants and Ethiopian rings. Ordinary (Eastern) Arabic numbers, while frequent on such jewelry, are not shown. Pseudo-numbers consisting of multiple vertical strokes are at far right, beyond the divider. (b) Where a shared symbol has a potential match in the canonical Seven Seals, the relevant Seal is shown. The symbol photos all come from jewelry that does not contain an actual Seal series, but in which the characters shown are distributed amongst non-Seal symbols. The black-and-white symbols (bottom row) have been extracted from genuine Seal series in Islamic documents, and their position in the canonical series is shown below in gray. A canonical Seal series can be seen in Fig. 13a.

glyphs), some shared/similar symbols of particular interest will be selected for further discussion.

Given the shared practice of combining numerical, alphabetic and non-number/non-letter symbols on silver(-like) rings that lack gemstones, as well as the presence of some shared or similar non-standard glyphs in their repertoires (Fig. 12a), one must naturally consider the possibility that the talismans of one region were influenced by those of the other. Interestingly, tradition affirms the existence of ancient connections between Ethiopia and the Tuareg. Thus, the mountains of Air in northern Niger allegedly saw various ancestral migrations from Ethiopia (and other regions far to the east), to the extent that the archaic name for the area is Abzin, a word related to Abyssinia, the old name for Ethiopia. The descendants of these early populations are called Ikanawane (“red skin”) and are particularly found among the silversmiths and artisans (*inaden*) of the Tuareg.¹⁰¹

Moving in the opposite direction, medieval trade routes connected the eastern Empire of Mali with Ethiopia, primarily via Agadez (for which the Agadez Cross of the Tuareg is named) and Bilma, an oasis town now in north-eastern Niger.¹⁰² Trade traffic in this direction persists even today. For example, the Muslim peoples of the semi-desert regions of the southern Sahara (lower Mali, Niger, and northern Nigeria) are the source of unique types of white-metal jewelry related to a manilla worn by the Zarma (Djerma) people of Niger. Such pieces are often carried into Ethiopia in trade, where the designs are copied in silver.^{103,104} Likewise, some inscribed Tuareg/Berber rings, pendants and *gri gri* could have migrated east across the continent and influenced the manufacture of talismanic rings for Muslim groups in the Ethiopian highlands.

Occasionally, jewelry items appear that seem to defy the rules. Fig. 4c shows a sketch of what was claimed by the item’s vendor to be a Tuareg ring sourced in Mali. The lack of a central face on this ring band, the material from which it is made (seemingly a white-metal alloy) and the twin circular inscriptions that adorn it all adhere to Ethiopian rather than Tuareg/Berber conventions. At far right in the figure, the upper inscription contains an invented Arabic numeral that conforms to a pattern established in Ethiopian but not in Tuareg/Berber rings (Fig. 8, 4-stroke row, second image). On the other hand, the serrated edging of the ring-band is not something that was observed for any ring in the Ethiopian survey. Of the many possible explanations for such a ring’s existence, one hypothesis would be that it represents the work of a Tuareg smith who (perhaps quite recently) had encountered and been inspired by an Ethiopian ring. Another possibility is that the ring may have been made in Ethiopia but traded westward, ultimately reaching a marketplace in Mali where it was presumed to be of local manufacture. We must also consider the rather prosaic possibility that the vendor was simply mistaken in attributing the ring to west rather than east Africa.

A reciprocal curiosity can be found in Anne van Cutsem’s book *A World of Rings*. In a photograph showing six talismanic silver rings ascribed to the Oromo,¹⁰⁵ three of the items are heavy silver annuli bearing one or two circular symbol strings of the expected type, and thus conform to our norms for talismanic rings from the Ethiopian highlands. The other three, however, have large flat face-plates that carry linear ciphers, in each case

split over four horizontal lines.¹⁰⁶ These ciphers are of a generic type that is widely diffused throughout the Islamic world,¹⁰⁷ an attribute equally true of the linear ciphers on Tuareg rings. Indeed, in appearance and symbol content, these Ethiopian examples could all pass as Tuareg cipher rings; symbol types A, B, C, G and H (Table 1) dominate. While in no position to doubt the attribution of these rings to the Oromo, I have seen no other Ethiopian examples of this type. As before, it would be prudent to countenance the possibility that these rings are recent artifacts inspired by non-indigenous talismans, or that they were actually obtained by trade – in this case, entering Ethiopia from the west (e.g., central or west Africa), east (e.g., the Arabian peninsula) or north (e.g. Egypt and Sudan). Van Cutsem herself admits that “In light of th[e] mobility of the populations, the exact ethnic identification of rings is often difficult; all the more so that on the occasion of the big markets the tribes willingly trade them.”¹⁰⁸

Individual glyphs

It is interesting to note that a J-shaped symbol – or its inversion and/or reflection – is present in both Tuareg and Ethiopian repertoires (Fig. 3, Section I, top two rows, far left, and Fig. 12a, far left; for context and additional examples, see Fig. 1b,g and Fig. 10a-d). This may be the Arabic letter ج, a popular element in “mainstream” magic squares formed from the letters of words due to the prevalence of the definite article ال (*al-*) (e.g., Fig. 4a). If so, it would carry the *abjad* value of 30. But the mirror-image of this letter looks like the Devanagari number 8, a symbol common on numerical magic square rings from India. Magic partakes of the mysterious and is notoriously syncretistic, so it is quite possible that the popularity of this glyph in the talismanic symbol repertoire arises from its letter/number duality and the resulting ambiguity in value. Magical curatives in other cultures and media also exploit semantic ambivalence.¹⁰⁹

The sixth symbol pair (from left) in Fig. 12a is a letter representing an S-sound in Libyco-Berber, which makes sense in the context of the Tuareg/Berber repertoire. The occurrence of a similar character in an Ethiopian ring may just be a coincidence. The seventh symbol pair in Fig. 12a may consist of stylized crescent-moon-plus-star motifs. A more elaborate version of this Islamic motif can be seen in Fig. 9h.

A “three-ring pyramid” or *çintamani* motif, in which three small circles mark the vertices of an imagined equilateral triangle, is commonly found stamped on heavy and otherwise plain brass, silver and white-metal Ethiopian rings. Examples on heavy brass rings are shown in Fig. 7c and in Fig. 8, at asterisk. The pyramid may appear in either orientation (i.e., apex pointing upward or downward). *Çintamani* motifs, which are popular in the art of many cultures, date back at least to the Etruscans of 600 BCE; they have been used *inter alia* to symbolise fertility (flowers, eggs), luxury (silk), courage (leopard spots), dignity (stars), the Three Jewels of Buddhism and the Christian Trinity.¹¹⁰ Here, the motif may primarily be a compound of stylized eye-shapes intended to oppose the evil eye.¹¹¹ Some Tuareg/Berber items carry the visually related three-dot pyramid, which may either be a Tifinagh element (Table 1, type F) or reflect the dots of the Arabic letter ث (Table 1, type C) (Fig. 12a, ninth pair from left; see also Fig. 6e). Some simple repeat-punch patterns (such as dots or circles

forming a linear row or chain) that appear on heavy Ethiopian rings are probably just decorative motifs that lack further significance.

Some of the characters shared by the Tuareg/Berber and Ethiopian jewelry match symbols in the Islamic Seven Seals, i.e., the *ism al-a'zam* or Greatest Name of God. The origin of this set of symbols is obscure,¹¹² but the Seal series (Fig. 13a) is widely diffused throughout the Islamic world where it is considered to confer protection against illness, oppression, attack or disaster. Magical uses of the symbols include exorcism, curing epilepsy, evading execution, releasing a prisoner, winning battles, finding hidden treasure, and securing respect and love.¹¹³ Most of the seal symbols can be found on the archaic-looking siltstone amulets in the Petrie Museum, which were mentioned earlier; those undated artifacts bear Kufic inscriptions and are thought to come from Egypt.¹¹⁴ On them, the symbols are not yet arranged in a linear sequence, and non-Seal symbols are also present. A similar situation obtains with the Tuareg/Berber and Ethiopian silver items, although here the proportion of Seal symbols relative to non-Seal characters never achieves the dominance that it does in some of the stone amulets. Particular Seal symbols are favored in the African talismans: the #, split-*hā'* (♠, ϕ) and multi-stroke pseudo-numbers (e.g. |||) are popular in both the Tuareg/Berber and Ethiopian repertoires. In the Tuareg/Berber case, the natural match of these Seal characters to the indigenous Libyco-Berber and Tifinagh alphabets has been discussed elsewhere.¹¹⁵ The third and seventh Seals contrast with those just mentioned in that they do not seem to be part of the east or west African character repertoire, except as part of an intact Seal series. This is a little surprising, since both of these Seals are related to Arabic letters (being a modified *mīm* and an inverted *wāw*, respectively), and Arabic letters – both unmodified and modified – form part of the Tuareg/Berber and Ethiopian repertoires. Shapes similar to these Seals do sometimes appear, but (as mentioned earlier) it is usually easier to see them as relating to the Arabic/Western number 9, in the case of the *mīm*, and a Western number 6 or inverted Arabic number 9, in the case of the inverted *wāw*.

It is intriguing that the same subset of Seal symbols is promoted in both the Tuareg/Berber and Ethiopian magic symbol repertoires. It is not possible to tell whether this results from a direct influence of one region/ethnicity upon the other, as contemplated above, or whether it reflects a common ancestral reservoir from which both symbol repertoires are derived. In regard to the latter option, we should note that there are no obvious parallels to the Tuareg/Berber Seal-containing magic square designs (e.g., Fig. 1d,e,g,h) in printed/lithographed editions of the *Shams al-ma'ārif al-kubrā*, but this influential handbook does contain some linear ciphers that mix a subset of Seal characters – especially the multi-stroke pseudo-number symbols – with Arabic letters and numbers.¹¹⁶ They therefore prefigure, in a general sense, the inscriptions on the Ethiopian rings and on Tuareg rings that bear linear symbol-strings. These ciphers could reflect early formulae from which the Seals were later “purified” to create the canonical Seal series, but are more likely to represent later “dilutions” of characters from the Seal series with other symbols so as to provide amulets focused on particular protections and remedies. In such ciphers one can see a step in the direction of the Seal-containing mixed repertoires of personalized Tuareg/Berber and Ethiopian rings.

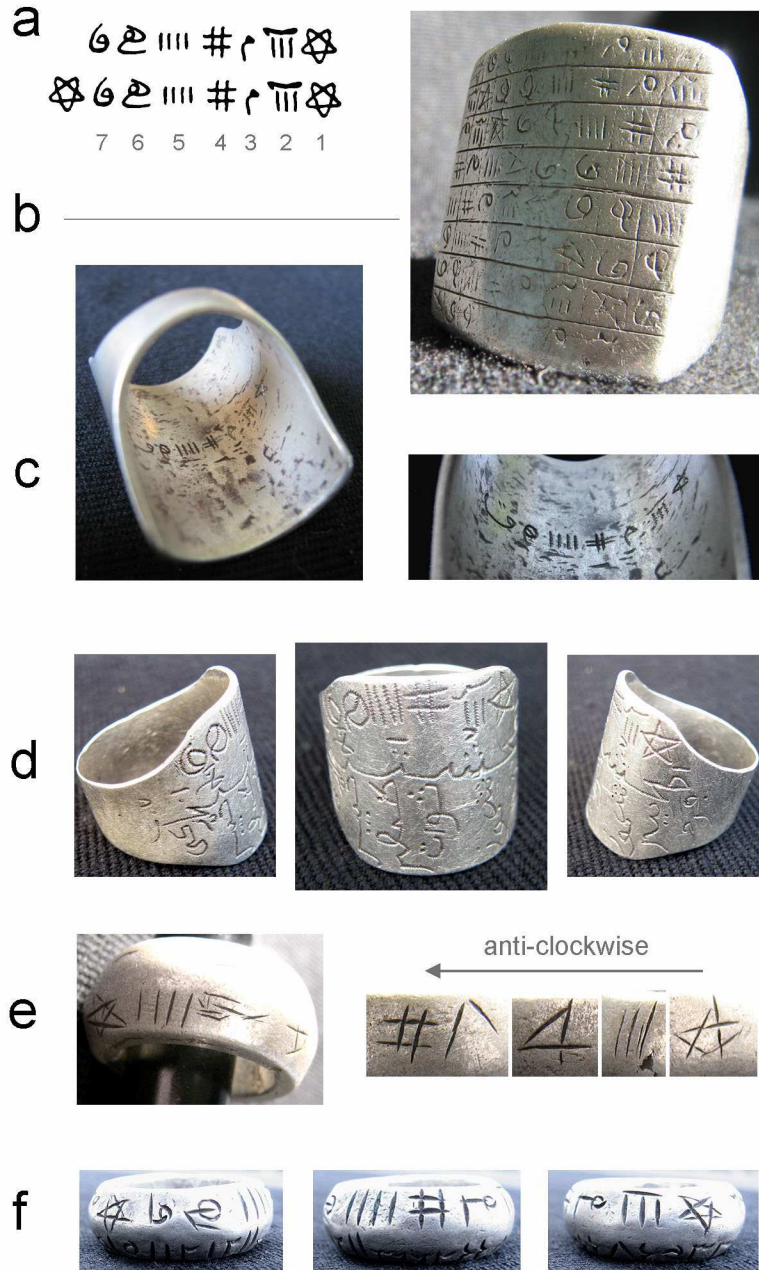


Fig. 13. The Seven Seals as an intact series on Tuareg and Ethiopian rings. In all cases, the Seal series reads from right to left. **(a)** The canonical Seal series; seven-membered version (above) and eight-membered version (below). Position numbers are shown in gray below the series. **(b)** Tuareg ring from Mali, whose 8 x 8 magic square contains repeats (with diagonal symmetry) of the eight-membered version of the Seal series.¹¹⁷ **(c)** Seal series engraved on the reverse of the ring shown in Fig. 2b (Appendix 2, item 13). **(d)** Tuareg ring, Mali. From right to left, the three images show serial anti-clockwise rotations of the ring. The Seal series appears at the top of the ring face; the third Seal is missing. **(e)** Ethiopian silver ring featuring a variant Seal series, as discussed elsewhere.¹¹⁸ The upper symbol sequence from the ring is at right (four small panels), with gaps removed, while the lower sequence from the ring is at left (large panel); read the Seal sequence from far right to far left.¹¹⁹ **(f)** The complete eight-membered version of the Seal series from the Ethiopian silver ring previewed in Fig. 7b and Fig. 9i. From right to left, the three images show serial anti-clockwise rotations of the ring.

Interestingly, the east and west African items are not wholly identical in their treatment of Seal-related characters, in that there appears to be a regional preference for one of the multi-stroke pseudo-number symbols over the other in the dominant ring format.¹²⁰ Specifically, the three-stroke pseudo-number (i.e., second Seal) is much more common than the four-stroke symbol (fifth Seal) in Ethiopian rings, whereas the reverse is true for Tuareg/Berber magic square rings. Accordingly, only one definite instance of |||| was seen in the 20 Ethiopian rings surveyed (Fig. 12a, far right),¹²¹ although one other glyph family might qualify at a pinch (i.e., // \ and \ \ // in Fig. 9b). In contrast, the three-stroke pseudo-number (second Seal) is frequently encountered in Ethiopian rings (e.g., Fig. 9a-f). In Tuareg magic squares, the reversal in preference occurs mainly because the four-stroke symbol is very popular in the type A repertoire (e.g., Fig. 1d,e). Not only do the three strokes appear less frequently but, when they do, they often fail to qualify as a Seal symbol because they are compounded with an additional digit (e.g., Fig. 1b,c,h).

Following on from the previous point, we should take care to note that Tuareg linear cipher rings differ from Tuareg magic square rings in maintaining a strong preference for ||| over ||||; among those surveyed in Appendix 2, there were 14 examples of the former grouping and none of the latter. For their east African counterparts – the square-faced rings with linear ciphers, attributed to the Ethiopian Oromo¹²² – we find again that ||| hugely outnumbers ||||, this time by a ratio of 6:1. Let us assume, for the sake of argument, that the Ethiopian attribution for the latter rings is correct. Then, in contrast to the dominant type of indigenous talisman in each region – i.e., magic square rings for Tuareg territory and ring bands with circular inscriptions for the Ethiopian highlands – square-faced rings bearing linear ciphers play by their own rules, conforming to a common template irrespective of whether they are sourced from east or west Africa. As we intimated above, these ciphers are of a generic type that is widely diffused throughout the Islamic world. No doubt their proliferation stems from the inclusion of a number of prototypes in the hugely influential *Shams al-ma'ārif al-kubrā*.¹²³

The Seven Seals as a series

The Seal series as an ensemble is clearly known to Tuareg *marabouts* and *inaden*, and they sometimes use it on rings in its undiluted form. Most spectacularly, repeats of the series may form the sole content of the ring's magic square (e.g., Fig. 13b). Jean Gabus provides an illustration of a magic square design from a Tuareg silver ring which at first sight looks odd,¹²⁴ but – after a rotation anti-clockwise of 90° – reveals itself to be a standard 7 x 7 grid of the canonical Seal series, albeit with many distortions to the symbols, in which each row is offset one cell to the left relative to the row above.¹²⁵ Anne van Cutsem has published a complementary pattern, albeit in this case upside down.¹²⁶ After inverting the photograph, we see a 7 x 7 grid of the canonical Seal series (without errors) where each row has been offset one cell to the right relative to the row above. Less ostentatiously, a single Seal series may appear on the face of a ring, along with standard correspondences (e.g., Fig. 13d). Below the Seven Seals in this ring appear the seven *sawāqit* (horizontal text) and the associated Beautiful Names of God (vertical text),^{127,128,129} both with some liberties in terms of accuracy. It is unusual for the *sawāqit* to be shown using joined letters; normally the isolated form of each letter is used.¹³⁰

A Seal series may even be concealed on the reverse of a Tuareg ring (Fig. 13c) whose face does not contain any Seal characters. In this particular example, the inverted-*wāw* (seventh Seal) has been transformed into the similar-shaped letter ق. In al-Būnī's *Kitāb laṭā'if al-ishārāt*, the Greatest Name of God is considered to be the hundredth name which concludes the series of "Ninety-nine Beautiful Names," and – as such – it is associated with the letter ق, whose numerical value is 100.¹³¹ The front face of this particular ring (shown in Fig. 2b) is primarily text-based (Table 1, type H). Around the perimeter of the face is written variants of *والله يعصمك* ("And Allah will protect you") from Qur'ān 5:67, while the centre is inscribed *وألقيت عليك محبة مني* ("And I bestowed my love upon you") from Qur'ān 20:39.¹³²

Similarly, one can find complete Seal series inscribed on Ethiopian silver rings. In one example, a less common variant of the series has been scratched rather crudely into the surface (Fig. 13e); this inscription has been discussed at length elsewhere.¹³³ In another example, not previously published, the eight-membered form of the canonical series has been stamped boldly into the silver (Fig. 13f). Below the Seal series on this ring appears the circular number series

5112₅12₃11**366244845331**5131351

which should be read anti-clockwise or right to left, as for Arabic text. The numbers shown here in bold translate as *Allāh Muḥammad Rasūl*,¹³⁴ three key words from the Arabic form of the Muslim profession of faith, "There is no God but **Allāh**, and **Muḥammad** is his **Prophet**." The number series "656565" (again to be read right to left) appears between the pentagrams that occupy the first and eighth Seal positions (Fig. 7b). This translates to *hūhūhū*,¹³⁵ with *hū* being the Sufi term which encompasses all of the Names of God in one.¹³⁶ Of course, both of the component letters of *hū* (ه and و) are represented in the Seal series itself.¹³⁷

An Ethiopian digression

It is known that the *Shams al-ma'ārif* – the master-handbook of Islamic magic attributed to al-Būnī, mentioned several times above – has been translated into Ge'ez, the liturgical language of the Ethiopian Christian churches.¹³⁸ Since the *Shams* contains tracts on the nature and uses of the Seven Seals, this raises the possibility that the Seals could emerge within the "folk religion" practices of Christianity in Ethiopia. After all, the symbols are widely known as the "Seals of Solomon,"^{139,140} and Solomon is of immense importance to Ethiopian Christianity.^{141,142} This is especially true in regard to the spiritual defences and healing practices offered by the *dabtaras* (itinerant Orthodox "holy men" who act as praise-givers, healers, exorcists, etc.).

One way such a transfer could occur is if Ethiopian *dabtaras* began to incorporate the Seals as protective motifs in Christian magic scrolls. These scrolls are already known to have appropriated many magical elements from Graeco-Egyptian, Islamic and other traditions.¹⁴³ At the moment, many scrolls contain pairs of interlocking C-shaped spectacle-letters or *charakteres* that typically occur in a set of seven and represent the seven classical planets,¹⁴⁴ just as each of the Islamic Seven Seals is closely identified with

a specific planet.^{145,146} A series of seven or eight such motifs sometimes concludes an Ethiopian magic scroll in the way that a seven- or eight-membered Seal series can be used to conclude an Islamic paper amulet, and Ethiopian designs of this kind (e.g., Fig. 4d) could easily evolve into representations of the Seal symbols. Indeed, Fig. 4d already bears superficial similarities to another cross-cultural appropriation of the Islamic Seal series, in this case one found at the end of a Kabbalistic vellum amulet from Israel.¹⁴⁷

While convincing evidence is still lacking, I am not alone in speculating that forms of the Islamic Seals may turn up in Christian magic scrolls. Ethiopian manuscript 128 in the Vatican Library (Vat. 128), a Christian manual written by a healer/magician of Greek origin practicing in Addis Ababa, contains (on folio 185 *verso*) a largely correct 7 x 7 Seven Seals magic square, annotated in Ge'ez and Greek.¹⁴⁸ This prompted Stefan Strelcyn to write "Thus, tomorrow we may perhaps find, in other Ethiopian manuscripts [...] the Arabic talisman of the "Seven Signs," more deformed than that in f. 185 v., written this time in a less skillful hand by an Ethiopian *dabtara*."¹⁴⁹

There are other ways, too, that the Seals could insinuate themselves into ostensibly Christian practice in Ethiopia. For example, talismanic rings like those in our survey might be worn by some highland Christians as well as by Muslims. The lack of shapes resembling the Cross – an easy glyph to stamp or etch – in the symbol repertoire under consideration suggests that it has not experienced any Christian influence.¹⁵⁰ But some Christian Oromo, for example, might still be comfortable with talismanic rings whose inscriptions are not obviously Islamic,¹⁵¹ such as ones bearing just the Seal series (e.g. Fig. 13e) or ones where Seal characters are intermixed with symbols that are not (or at least need not be) Arabic in origin (e.g., Fig. 10a-d). Angela Fisher mistakenly identified the symbols on a set of Wollo rings as Ge'ez,¹⁵² the liturgical language of the Ethiopian Christian churches, perhaps because some of the items may have been sourced from Christian Oromo. Anne van Cutsem made the same mistake with her Oromo rings,¹⁵³ perhaps for the same reason. In addition, an Addis Ababa-based merchant ascribes talismanic rings sourced from Wollo to the Amhara, a group that is about 82% Christian.¹⁵⁴

Conclusion

In the northern parts of West Africa, Berber groups such as the Tuareg of Mali and Niger are officially Muslim but retain some pre-Islamic religious practices. In particular, they make extensive use of inscribed silver rings, pendants and plaques as talismans. In the Ethiopian highlands of East Africa, about half of the Oromo people are nominally Muslim, but – as for the Tuareg – much of their jewelry has a protective function associated with traditional beliefs. Such items are made by metalworking artisans, the smiths. There are many similarities in the roles of smiths in Tuareg and Ethiopian societies; for example, both are "outsider" groups believed to possess supernatural power, which results in them being simultaneously valued and resented by others. Contact between Tuareg and Ethiopian smiths is suggested by legend, and trade between the two regions has been routine since at least medieval times.

Tuareg and Ethiopian talismanic rings are distinct from their conventional Islamic counterparts in the Middle East in that they lack a central bezel within which a gemstone or gold inlay presents the protective inscription. Tuareg/Berber inscriptions are usually incised, engraved or cast directly on the ring's face, which is often large, while Ethiopian talismanic rings typically lack a central face and carry inscriptions stamped or engraved in a circle around the ring band. Tuareg/Berber symbols are usually more fluid and refined than Ethiopian ones, and are more likely to be blackened to a niello-like high-contrast finish. In the online marketplace, Tuareg rings outnumber Ethiopian ones by more than 5:1, although it is unclear whether the imbalance is driven by a difference in supply or demand.

Inscribed Tuareg/Berber silver talismans typically carry either a linear cipher or a magic square design. A survey of 132 Tuareg/Berber items revealed that the symbol repertoire underpinning the protective inscriptions is drawn from overlapping categories that include numbers (Eastern Arabic and Perso-Arabic numerals, and possibly Western digits and Indian Devanagari numbers as well), letters (both Arabic and Tifinagh), and the Islamic Seven Seals. Reflections and rotations of individual glyphs are common. The rectilinear influence of Tifinagh on the symbol repertoire is evident, but the similarity of simple Tuareg/Berber geometric symbols to pictograms used by more southerly non-Berber Malian groups does not amount to a strong case for cultural transfer. In contrast, a few Hebrew letters do seem to have found their way into Moroccan Berber talismans.

The Tuareg/Berber magic squares sometimes display complete or partial symmetry, with diagonals – usually centered on the one running from top right to bottom left – containing repeats of a single symbol. No two talismanic designs in the survey were identical, but it was possible to define sub-groups based on style and content. Most designs combine symbols of different types; the wholesale mixing of letter- and number-like and other characters within a magic square seems to be very much a Tuareg/Berber characteristic. Numerical or numerical-looking designs provide the most popular categories of magic square, but none of the magic squares in the survey seemed to be mathematically competent. Tuareg *gri gri* plaques also carry magic square designs, but these seem to contain mainly Tifinagh letters. A distinct set of rings also carry Tifinagh-based magic squares; recent or newly-made items of this type may be “Tifinagh alphabet” souvenirs designed primarily for sale to Western visitors or to online customers overseas.

Ethiopian white-metal rings are convex circular bands of hard alloy into which glyphs have been stamped using linear or circular punch tools. Silver rings, being softer, may bear symbols incised by scratching or engraving instead of stamping. For either material, the symbols are typically arranged sequentially around the ring's shank with even spacing, usually as two circular symbol series. The series are sometimes identical, or almost so; in such cases, the symbols of the upper circle may be a reflection (through the ring's equator) of those in the lower one. This “visual twinning” may serve a similar magical function to the diagonal symmetry seen in some Tuareg/Berber magic squares.

The Ethiopian symbol repertoire appears to be drawn from numbers (Eastern Arabic and possibly Devanagari numerals), a limited subset of Arabic letters, the Islamic Seven

Seals, and unique symbols that resist identification. As with their Tuareg/Berber counterparts, most Ethiopian rings combine numerical and non-numerical symbols, and reflections and rotations of characters are common. Although the unidentified symbols are mainly local glyphs not shared by Tuareg/Berber or Middle Eastern rings, there is still a significant overlap between the west and east African symbol repertoires. For example, a J-shaped symbol (possibly the Arabic letter ج) and its inversion and/or reflection (potentially a Devanagari number 8) provides a semiotically ambiguous “family” with representation in both symbol-sets. Moreover, the same subset of Seal symbols – namely the #, split-*hā'* (♣ or φ) and multi-stroke pseudo-numbers (||| or ||||) – is favored in both repertoires. However, we find that ||| is much more common than |||| in Ethiopian rings and that the reverse is true for the most distinctive (and seemingly most popular) Tuareg/Berber talismans, i.e., rings bearing a magic square.

Unsurprisingly, the most extreme similarities occur in the small subset of Tuareg and Ethiopian rings that carry one or more complete sets of the Islamic Seven Seals. Of course, this symbol series is common not just to Islamic talismans from east and west Africa, but to those from the Middle East as well.

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All publication dates are CE.

¹ Anne van Cutsem (2000) *A World of Rings: Africa, Asia, America*, Skira Editore/Thames & Hudson, Milan & London, p.7.

² Raymond Mauny (1954) “Une enigme non resolue: origine et symbolique de la Croix d’Agades,” *Notes Africaines* No. 63, 70-79.

³ Helen E. Hagan & Lucile C. Myers (2006) *Tuareg Jewelry – Traditional Patterns and Symbols*, Xlibris, USA, p.50.

⁴ Susan Rasmussen (2013) *Neighbors, Strangers, Witches, and Culture-Heroes: Ritual Powers of Smith-Artisans in Tuareg Society and Beyond*, University Press of America, Lanham, MD, p.45.

⁵ Hagan & Myers (2006), p.50-53.

⁶ While it has been claimed that crosses are handed down from father to son [Hagan & Myers (2006), p.50 & 56], and there is certainly support in the ethnographic literature for men wearing them as well as women [e.g., Mauny (1954), p.71], it seems that nowadays they are mainly worn by women [Cordelia Donohoe, pers. commun.; online at <http://azultribe.com/about/>]

⁷ Angela Fisher (1984) *Africa Adorned*, Collins, London, p.293.

⁸ Online at <http://www.stgeorgeofethiopia.com/crosses.html>, accessed 1 May, 2014.

⁹ As we shall see, in both cases the clientele is Islamic. Islamic *ḥadīth* prohibit the wearing of gold rings (e.g., Bukhari, Volume 7, Book 72, Number 754) but sanction the use of silver ones (e.g., Abū Dāwud, Book 34, Number 4211; Bukhārī, Volume 7, Book 72, Number 759). Prophet Muḥammad himself wore a silver or silver-plated ring. Accordingly, in the Sahara, silver is viewed as the “blessed metal”

- while gold is considered to be unlucky; van Cutsem (2000), p.13. Silver or otherwise, the use of non-Qur'ānic amulets or talismans is forbidden in normative Islam, and even Qur'ānic ones are precluded in the stricter forms of Sunni Islam (e.g., Shaykh Fahd as-Suhaymee & Abu Faatimah Azhar Majothi (2009) *Taweez – Amulets in Light of the Qur'ān aand Sunnah*, Darul Imam Islam, Leicester, UK).
- ¹⁰ Alaa Eddine Sagid (2011), online at http://ethnicjewels.ning.com/photo/old-silver-ring-with-arabic?xg_source=activity, posted 18 May, 2011; accessed 1 May, 2014.
- ¹¹ For a general introduction to the *inaden*, see Andy Morgan (2014) “The Life of a Tuareg Artisan” (extract from a work in progress), online at <http://www.saharanarts.com/ethnic-african-tuareg-jeweller/4515698230> (page 1) and <http://www.saharanarts.com/jewelleryarticle-page-ii/4547894934> (page 2), accessed 27 Jun, 2014.
- ¹² Jean Gabus (1982) *Sahara, Bijoux et Techniques*, La Baconnière, Neuchâtel, p.235.
- ¹³ Hagan & Myers (2006), p.48.
- ¹⁴ Marguerite Rigoglioso (2007) “Out of the Sahara,” *Stanford Magazine*, May/June issue, online at <http://www.stanfordalumni.org/news/magazine/2007/mayjun/features/tuareg.html>, accessed 15 Jan, 2012.
- ¹⁵ Rasmussen (2013), p.1-49.
- ¹⁶ Derek White (2009) “So Long & Thanks for the Samaki: Last Will & Lament: Bamako, Mali. 21.05.09.” Online at <http://www.5cense.com/EA/homeward.htm>, accessed 1 May, 2014.
- ¹⁷ Online at <http://ethnicjewels.ning.com/photo/cimg0231?context=user> and http://ethnicjewels.ning.com/photo/cimg0807-1?xg_source=activity, accessed 26 April, 2014.
- ¹⁸ Musée d'Ethnographie de Genève; online at http://www.ville-ge.ch/meg/musinfo_public.php?id=045177 and http://www.ville-ge.ch/meg/musinfo_public.php?id=045178, accessed 30 April, 2014.
- ¹⁹ E.g., ViaggiTribale Store, online at http://www.ethiopian-art.com/prod/69-silver_decorated_ring_north_ethiopia_php, item RI022ETH; also http://www.ethiopian-art.com/prod/78-brass_ring_north_ethiopia.php, item RI030ETH, both accessed 2 May, 2014.
- ²⁰ Angela Fisher ascribes talismanic Ethiopian rings to the Oromo of Welo (Wollo) province [Fisher (1984), p.293-295] and provides some photographs [p.298, section 3]. An Addis Ababa-based merchant (online at <http://stores.shop.ebay.com.au/habeshacraft>) also ascribes the rings to Wollo.
- ²¹ Anne van Cutsem also ascribes talismanic Ethiopian rings to the Oromo; van Cutsem (2000), p.203. She mentions Harar, a mainly Islamic city in the eastern extension of the Ethiopian Highlands, as a major production centre for silver jewelry; van Cutsem (2000), p.12. A proportion of Harar's population are Oromo.
- ²² J. Spencer Trimingham (1952) *Islam in Ethiopia*, Geoffrey Cumberlege/Oxford University Press, Oxford, p.137.
- ²³ “African People: People of Africa: Oromo,” online at <http://www.africanholocaust.net/peopleofafrica.htm#o>, accessed 14 June, 2014.
- ²⁴ Fisher (1984), p.285.
- ²⁵ Rasmussen (2013), p.ix, 1-49 & 74-95.
- ²⁶ Rasmussen (2013), p.74-95.
- ²⁷ Ronald A. Reminick (1974) “The Evil Eye Belief Among the Amhara of Ethiopia,” *Ethnology* 13, 279-291.
- ²⁸ Jacques Mercier (1979) *Ethiopian Magic Scrolls*, George Braziller, New York, p.115.
- ²⁹ Qur'ān 55:15.
- ³⁰ Rasmussen (2013), p.19.
- ³¹ Dominique Casajus (1989) “Sur l'Argot des Forgerons Touaregs,” *AWAL – Cahiers d'Études Berbères* 5, 124-136.
- ³² Rasmussen (2013), p.26 & 60-61.

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- ³³ Rasmussen (2013), p.26-49 & 74-95.
- ³⁴ Hagan & Myers (2006), p.95.
- ³⁵ Source TBA.
- ³⁶ Published examples appear in Hagan & Myers (2006), p.83, and van Cutsem (2000), p.52. Note that all of the magic square rings on the latter page have been photographed upside down.
- ³⁷ Published previously as Fig. 9c in Lloyd D. Graham (2012) "The Seven Seals of Judeo-Islamic Magic: Possible Origins of the Symbols," online at https://www.academia.edu/1509428/The_Seven_Seals_of_Judeo-Islamic_Magic_Possible_Origins_of_the_Symbols, accessed 21 Jun, 2014.
- ³⁸ Cf. similar in van Cutsem (2000), top ring p.204, which is likened to a camel saddle.
- ³⁹ Published previously as Fig. 9b in Graham (2012).
- ⁴⁰ Hagan & Myers (2006), p.62-75.
- ⁴¹ Johannes Glaser (2005) *Cire-Perdue: Geheimnis und Faszination des Westafrikanischen Gelbgusses*, Halle (Saale)/Bad Brambach, Germany, ISBN 3-00-016808-7.
- ⁴² Gabriella F. Scelta (2002) "The Calligraphy and Architecture of the Nomadic Tuareg within the Geometric Context of Islam," online at <http://www.thisisgibes.com/home/writing>, accessed 1 Jun, 2014.
- ⁴³ Michael C.A. Macdonald (2005) "Literacy in an Oral Environment," In: *Writing and Ancient Near Eastern Society: Essays in Honor of Alan Millard*, eds. Piotr Bienkowski, Christopher B. Mee & Elizabeth A. Slater, T. & T. Clark International, p.49-118, at p.62.
- ⁴⁴ Eastern Arabic numerals are • ١٢٣٤٥٦٧٨٩
- ⁴⁵ Perso-Arabic numerals are • ١٢٣٤٥٦٧٨٩
- ⁴⁶ Edmond Doutté (1908) *Magie et Religion dans l'Afrique du Nord*, Adolphe Jourdan, Algiers, p.125-177 & 169-171, at 169-172. A facsimile reprinting published in 1984 by J. Maisonneuve & P. Geuthner, Paris, is more widely available.
- ⁴⁷ Tewfik Canaan (2004) "The Decipherment of Arabic Talismans," In: *Magic and Divination in Early Islam*, ed. Emilie Savage-Smith, Ashgate Variorum, Aldershot, p.125-166 & 167-177, at 169-172.
- ⁴⁸ Georges C. Anawati (1967) "Le Nom Supreme de Dieu (*ism Allāh al-a'zam*)," In: *Atti del Terzo Congresso di Studi Arabi e Islamici: Ravello, 1-6 Settembre 1966*, Istituto Universitario Orientale, Naples, p.7-58.
- ⁴⁹ Hans A. Winkler (2006) *Siegel und Charaktere in der Mohammedanischen Zauberei*, Geheimes Wissen, Graz, Austria, 76-195. I cite this modern reprinting by M. Munteanu rather than the 1930 Berlin edition of Walter de Gruyter & Co. as it inexpensive and still in print, unlike the original book. Note that the pagination of the original is not preserved.
- ⁵⁰ Canaan (2004), p.159 & 164; also Tewfik Canaan (1936) "Arabic Magic Bowls," *Journal of the Palestine Oriental Society* 16, 79-127, at 94.
- ⁵¹ Rasmussen (2013), p.29.
- ⁵² Rasmussen (2013), p.56 & 60.
- ⁵³ Aḥmad al-Būnī (attrib.; 1927-8), *Shams al-Ma'ārif al-Kubrā*, "al-Ḥusaynī" lithograph/printed edition, Muḥammad 'Alī Ṣubayḥ wa-'Awlāduḥ, Cairo, Books 2 & 4.
- ⁵⁴ This title deliberately excludes Berber silver spiral pendants, ear-rings and *hamsa* pieces inscribed with Tifinagh and Tifinagh-like symbols that are not arranged in grids, such as those pictured by J. H. Misguich & G. Misguich (2002) in "Carré Magique Indo-Arabe et Tortue Chinoise de Lho Shu," online at http://www.researchgate.net/publication/235223928_Carre_magique_indo-arabe_et_tortue_chinoise_de_Lho_Shu, p.43-45; accessed 1 Jun, 2014.
- ⁵⁵ Western influence should not be underestimated. Van Cutsem (2000), p.52, bottom, shows a Tuareg ring with a circular face based on a Western talismanic template, in which a pentagram is surrounded by the word "TETRAGRAMMATON."

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- ⁵⁶ With or without the *abjad* values of the letters, this square is not mathematically competent. It does however show some arithmetic structure, in that the value of the top row (the letters) is 93, the same value as the first (i.e., left-hand) column and probably the third column too.
- ⁵⁷ Three such items (Appendix 2, items 112-114) are pictured by J. H. Misguich & G. Misguich (2002), p.43-45.
- ⁵⁸ In Appendix 2, they form a sub-group within category 5A (items 43 & 64).
- ⁵⁹ Published previously as Fig. 9a in Graham (2012).
- ⁶⁰ Similarly, van Cutsem (2000), p.20 & 201, shows a Moroccan Berber ring from the Anti-Atlas bearing a 2 x 2 grid that contains the first and second Seal symbols, in reverse of normal order, with type A symbols (IV & VI) in the other two cells. This ring is exempt from the rule established in the text as it is not of Tuareg origin. In addition, the second Seal's non-numeric role is once again made clear by the retention of its over-bar (the horizontal bar above the |||).
- ⁶¹ Canaan (2004), p.164.
- ⁶² W.M. Flinders Petrie (1914) *Amulets*, Constable & Co., London, p.32 (Pl. 23, no. 136 k,l). These are objects UC52237 and UC52238, both viewable online via the UCL Museums & Collections: Petrie Museum Catalogue, at <http://petriecat.museums.ucl.ac.uk/>, accessed 17 May, 2014.
- ⁶³ Marija Gimbutas (1987) "The Earth Fertility of old Europe," *Dialogues d'Histoire Ancienne* 13, 11-69, at 14-15, 31 & 48.
- ⁶⁴ Gimbutas (1987), 31 & 48.
- ⁶⁵ Gimbutas (1987), 14-15.
- ⁶⁶ E.g., Oslo Univ. Library Papyrus Collection, P. Oslo 1, col. vii, online at <http://www.uio.no/english/about/news-and-events/events/other-events/2010/papyrus-exhibition.html>, accessed 20 May, 2014. For another example, see Kurt Rudolph (1984) *Gnosis: The Nature and History of Gnosticism*, T. & T. Clark, Edinburgh, p.223; figure reproduced by Katherine Schaefer (2011) "Gnostic Imagery from the Beginning of our Era to Today," *The Rose+Croix Journal* 8, 99-123, at 115 (Fig. 11).
- ⁶⁷ Kirsten Dzwiza (2012) "Der Asteriskos als Kritisches Zeichen in Magischen Texten – Acht Beispiele in PGM VII und PGM XCIV," *Acta Classica Universitatis Scientiarum Debreceniensis* XLVIII, 149-165, online at http://uni-heidelberg.academia.edu/KirstenDzwiza/Papers/1955777/Der_Asteriskos_als_kritisches_Zeichen_in_magischen_Texten_-_Acht_Beispiele_in_PGM_VII_und_PGM_XCIV, accessed 16 May, 2014.
- ⁶⁸ E.g., van Cutsem (2000), p.20.
- ⁶⁹ Lloyd D. Graham (2011a) "In Islamic Talismans, Repeat-Letter Ciphers Representing the 'Greatest Name' Relate to an Early Prototype of the Seven Seals and may Link the Seals with the Pleiades," *Epigraphic Society Occasional Papers (ESOP)* 29, 70-91; online at http://www.academia.edu/1999297/In_Islamic_Talismans_Repeat-Letter_Ciphers_Representing_the_Greatest_Name_Relate_to_an_Early_Prototype_of_the_Seven_Seals_and_may_Link_the_Seals_with_the_Pleiades, accessed 21 Jun, 2014.
- ⁷⁰ Sencan Altinoluk & Nilüfer Atakan (2014) "Abraxas – A Magical Gem in the Istanbul Archaeological Museums," *Anatolia Antiqua* 22, 219-223, at 222.
- ⁷¹ Dominique Zahan (1950) "Pictographic Writing in the Western Sudan," *Man* 50, 136-138.
- ⁷² Solange de Ganay (1950) "Graphies Bambara des Nombres," In: *Journal de la Société des Africanistes* 20 (2), 295-305; Zahan (1950), 136-138; Pascal J. Imperato (2001) *Legends, Sorcerers, and Enchanted Lizards*, Africana/Holmes & Meier, New York & London, p.21-22.
- ⁷³ Zahan (1950).
- ⁷⁴ Imperato (2001), p.21-22.
- ⁷⁵ Marcel Griaule & Germaine Dieterlen (1951) *Signes Graphiques Soudanais*, Hermann et Cie., Paris, p.15-18, 25, 66 & 76; Zahan (1950); de Ganay (1950); Imperato (2001), p.21-22;

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- ⁷⁶ Note that the four-stroke symbol in the Islamic Seven Seals (i.e., the fifth Seal) is also routinely interpreted as four fingers, in this case pointing to good deeds. See Graham (2012).
- ⁷⁷ Online at <http://www.jewishvirtuallibrary.org/jsource/anti-semitism/morocjews.html>; accessed 17 May, 2014.
- ⁷⁸ For example, see Theodore Schrire (1982) *Hebrew Magic Amulets: Their Decipherment and Interpretation*, Behrman House, New York, p.44 & 144-146; photographs of Moroccan silver talismans with Hebrew inscriptions appear in Plates 7, 8 & 10.
- ⁷⁹ Steven M. Wasserstrom (2005) "The Unwritten Chapter: Notes towards a Social and Religious History of Geniza Magic," In: *Officina Magica: Essays on the Practice of Magic in Antiquity*, ed. Shaul Shaked, Brill, Leiden/Boston, p.269-294, at p.275.
- ⁸⁰ Ken Blady (2000) *Jewish Communities in Exotic Places*, Jason Aronson, Northvale NJ, p.298.
- ⁸¹ Van Cutsem (2000), p.10
- ⁸² Fisher (1984), p.261.
- ⁸³ Marvine Howe (2005) *Morocco: The Islamist Awakening and Other Challenges*, Oxford University Press, Oxford/New York, p. 184.
- ⁸⁴ Daniel J. Schroeter & Vivian B. Mann (2000) *Morocco: Jews and Art in a Muslim Land*, Merrell, London, p. 27.
- ⁸⁵ Nicholas de Lange (2005) "Jews in the Age of Justinian," In: *The Cambridge Companion to the Age of Justinian*, ed. Michael Maas, Cambridge University Press, Cambridge/New York, p.401-426, at p.411.
- ⁸⁶ Rasmussen (2013), p.30.
- ⁸⁷ It is certainly true that the Jews of the Moroccan Atlas resembled *inaden* in being an outcast group of artisans and traders precluded from owning land and treated with contempt by the Berber population; Blady (2000), p. 298.
- ⁸⁸ Rasmussen (2013), p.30.
- ⁸⁹ Fisher (1984), p.195.
- ⁹⁰ Van Cutsem (2000), p.13.
- ⁹¹ Occasionally a turret bezel may house a gemstone as a centrepiece, but the gem is usually not inscribed. See, for example, van Cutsem (2000), p.38, lower of the two rings at far right.
- ⁹² Fisher (1984), p.293.
- ⁹³ Online at http://www.ville-ge.ch/meg/musinfo_public.php?id=045177 and http://www.ville-ge.ch/meg/musinfo_public.php?id=045178, accessed 30 Apr, 2014.
- ⁹⁴ Online at <http://www.oldbeads.com/africa.html> AF507-508, accessed 24 May, 2014.
- ⁹⁵ Linear cipher design, online at <http://www.tribalsouk.com/heavy-unique-fulani-silver-amulet-ring-p-3880.html>, accessed 24 May, 2014.
- ⁹⁶ Magic square design, online at <https://www.etsy.com/au/listing/158663726/old-fulani-silver-mans-amulet-bracelet?ref=market>, accessed 24 May, 2014.
- ⁹⁷ Online at <http://www.berberia.es/en/rings/614-anillo-antiguo-fulani.html> and http://www.ebay.com/itm/Old-Fulani-Peul-African-Silver-Ring-Mali-/181156748565?ru=http://search.ebay.com:80/181156748565_W0QQfviZ1, both accessed 24 May, 2014.
- ⁹⁸ The Ottoman pendants appear particularly archaic. The snake-like schematic on the Ottoman pendant shown in Fig. 7b is reminiscent of snake-like motifs on "gnostic gemstones," such as the amulet from the Magical Amulet Collection of the Taubman Medical Library shown by Daniel Stolzenberg (2006) in "The Study of Amulets in Early Modern Europe," Max Planck Institute for the History of Science, online at <http://www.mpiwg-berlin.mpg.de/en/research/projects/amuletsEarlyModernEurope>, accessed 27 May, 2014. One might also speculate that the circles connected by (or adjacent to) lines in Fig. 7a,b are a remembrance of the "spectacle-letters" or *charakteres*, ancient symbols of uncertain origin whose linear elements terminate in small circles [Emilie Savage-Smith, 2004, "Introduction – Magic and

Divination in Early Islam,” In: *Magic and Divination in Early Islam*, ed. Emilie Savage-Smith, Ashgate Variorum, Aldershot, p.xiii-xlxi, at p.xxiv; Canaan (2004), p.167-169; Winkler (2006), p.196-218].

- ⁹⁹ Fisher (1984), p.267.
- ¹⁰⁰ Fisher (1984), p.294.
- ¹⁰¹ Hagan & Myers (2006), p.18-19.
- ¹⁰² Map, “Trade Routes of Medieval Africa,” online at <http://islamandafrica.com/>, accessed 22 May, 2014.
- ¹⁰³ Scott Semans, online at <http://www.coincoin.com/seXA.htm>, accessed 22 May, 2014.
- ¹⁰⁴ Fisher (1984), p.278-279.
- ¹⁰⁵ van Cutsem (2000), p.38 & 203.
- ¹⁰⁶ Note that the cipher ring at far left [van Cutsem (2000), p.38] has almost certainly been photographed upside down.
- ¹⁰⁷ For examples, see Winkler (2006), p.200 & 204; Doutté (1908), p.168, 263 & 279; Dorothee A.M. Pielow (1995) *Die Quellen der Weisheit*, Georg Olms, Hildesheim, p.164; pseudo-Asaph Ben Berechiah, 2009, *Grand Key of Solomon the King*, Ishtar, Vancouver, p.76-148.
- ¹⁰⁸ Van Cutsem (2000), p.14.
- ¹⁰⁹ For example, some images on magical gems use visual plays upon words and others combine Egyptian and Graeco-Roman elements in ways that support “bilingual” readings. Véronique Dasen (2014) “Healing Images: Gems and Medicine,” *Oxford Journal of Archaeology* 33 (2), 177-191.
- ¹¹⁰ Julianna Lees “Three Hares and Cintamani – Two Well-Travelled Motifs. Part 2: Another ‘Three in One’ Symbol, Cintamani.” Online at <http://www.green-man-of-cercles.org/articles/cintamani.pdf>, accessed 29 Jun, 2015.
- ¹¹¹ While accepting that rosettes have an apotropaic function of this kind, Anne van Cutsem does temper this by saying that, in African art, dot-shaped motifs always refer to something real, such as stars, grains of millet or a hunter chasing game animals [van Cutsem (2000), p.202].
- ¹¹² Graham (2012).
- ¹¹³ Lloyd D. Graham (2014) “A Comparison of the Seven Seals in Islamic Esotericism and Jewish Kabbalah,” online at https://www.academia.edu/5998229/A_comparison_of_the_Seven_Seals_in_Islamic_esotericism_and_Jewish_Kabbalah.
- ¹¹⁴ Graham (2012).
- ¹¹⁵ Graham (2012).
- ¹¹⁶ al-Būnī (attrib.; 1927-8), Book 3, p.118-119.
- ¹¹⁷ Published previously as Fig. 9d in Graham (2012).
- ¹¹⁸ Graham (2011a).
- ¹¹⁹ A monochrome version of this was published previously as Fig. 2a in Graham (2011a).
- ¹²⁰ To err on the side of caution, one should interpret “dominant” as meaning “the most distinctive, and seemingly the most popular on the basis of its abundance in the Western marketplace.”
- ¹²¹ By way of reminder, this survey excluded rings with complete Seal series, which form a special class (dealt with later in *The Seven Seals as a series*)
- ¹²² Van Cutsem (2000), p.38.
- ¹²³ See, for example, al-Būnī (attrib.; 1927-8), Book 2, p.89, 91 & 96; and Book 3, p.118-119.
- ¹²⁴ Jean Gabus (1982), p.235. I am most grateful to Kate Morgan of www.saharanarts.com (Bristol, UK) for giving me access to this illustration.
- ¹²⁵ An undegraded example of this design can be seen in Graham (2012), Fig. 5a.
- ¹²⁶ Van Cutsem (2000), p.52.

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- ¹²⁷ Canaan (2004), p.130, 148 & 155.
- ¹²⁸ Winkler (2006), p.94 fn 1.
- ¹²⁹ Doutté (1908), p.199-203.
- ¹³⁰ Lloyd D. Graham (2011b) "Qur'ānic Spell-ing: Disconnected Letter Series in Islamic Talismans," online at http://www.academia.edu/516626/Qur_anic_Spell-ing_Disconnected_Letter_Series_in_Islamic_Talismans.
- ¹³¹ Edgar W. Francis IV (2005) *Islamic Symbols and Sufi Rituals for Protection and Healing: Religion and Magic in the Writings of Ahmad ibn Ali al Buni (d. 622/1225)*, PhD Dissertation, Univ. California Los Angeles, CA, p.190 fn 358.
- ¹³² I am grateful to Asma, an Algerian student of literature (<http://kyoasema.deviantart.com/>), for her help in reading the Kufic script on the ring. Her contribution can be seen online at <http://lloydg.deviantart.com/art/Enigma-12-148979482>, accessed 1 Jun, 2014.
- ¹³³ Graham (2011a).
- ¹³⁴ Canaan (2004), 162.
- ¹³⁵ Canaan (2004), 162.
- ¹³⁶ Shems Friedlander (1992) *The Whirling Dervishes: Being an Account of the Sufi Order known as the Mevlevis and its Founder the Poet and Mystic Mevlana Jalalūddin Rumi*, State Univ. New York Press, New York.
- ¹³⁷ Graham (2012).
- ¹³⁸ Nicole B. Hansen (2002) "Ancient Execration Magic in Coptic and Islamic Egypt," In: *Magic and Ritual in the Ancient World*, eds. Paul A. Mirecki & Marvin W. Meyer, Brill, Leiden, p.427-445, at p.429 note 7; Jacques Mercier (1997) *Art That Heals – The Image as Medicine in Ethiopia*, Museum for African Art/Prestel, New York, p.54.
- ¹³⁹ M. Gaster (1936) "Review of *Siegel und Charaktere in der Mohammedanischen Zauberei* by H. A. Winkler," *Journal of the Royal Asiatic Society of Great Britain and Ireland* 68 (1), 131-133.
- ¹⁴⁰ Emilie Savage-Smith (2004), p.xxiii-xxiv.
- ¹⁴¹ Mercier (1979), p.8, 19, 30, 60-61, 92-93 & 114-115.
- ¹⁴² Mercier (1997), p.48-49.
- ¹⁴³ Mercier (1979) p.31; Mercier (1997), p.61 fn 34 & p.115.
- ¹⁴⁴ E.A. Wallis Budge (1978) *Amulets and Superstitions*, Dover, New York, p.188-189.
- ¹⁴⁵ Canaan (2004), p.171.
- ¹⁴⁶ Anawati (1967).
- ¹⁴⁷ Graham (2011a), Fig. 2b.
- ¹⁴⁸ Photo in Strelcyn, p.LXI. Throughout the square, the Seal series shows a second pentagram in place of the split-*hā'* (sixth Seal).
- ¹⁴⁹ Stefan Strelcyn (1955) "Prières Magiques Éthiopiennes pour Délivrer les Charmes," *Rocznik Orientalistyczny* 18, Polska Akademia Nauk, Warszawa., p.LXII; translated from the French by the present author.
- ¹⁵⁰ Some Ethiopian highland rings do carry crosses, but without any symbols from the repertoire we have been considering; these items are presumably worn by Christians.
- ¹⁵¹ van Cutsem (2000), p.12, remarks that "Christian and Moslem Oromo wore lots of jewellery of all sorts," with a preference for simple but heavy silver items.
- ¹⁵² Fisher (1984), p.298, section 3.
- ¹⁵³ van Cutsem (2000), p.203.
- ¹⁵⁴ Online at <http://stores.shop.ebay.com.au/habeshacraft>, accessed 8 April, 2014.

Appendix 1

A Tuareg *marabout* in Agadez speaks about talismanic rings

A recent article in the New York Times provides a Western perspective of a *marabout* as follows. A *marabout* is part spiritual scientist,

... part Islamic jurist. He spends most days and nights in prayer and reflection. He doles out religious advice and protective amulets called gris-gris. A gris-gris can be almost anything. A piece of jewelry. A prayer written on a scrap of paper to wear in a leather pouch around the waist or neck or forearm. I have never met a Malian who hadn't at some point sought the services of a marabout or who went around without a gris-gris.

Anna Badkhen, "Magical Thinking in the Sahel," *New York Times*, 27 June, 2015; online at <http://mobile.nytimes.com/2015/06/28/opinion/magical-thinking-in-the-sahel.html?referrer=&r=0>

It is much less common to hear the perspective of the *marabouts* themselves on how they view their occupation, trade, clients and competitors. In particular, there is almost no published "insider" information on the process of designing a talismanic ring. There may be as many different opinions as there are *marabouts* and *inaden*, but even a single voice would provide a useful starting place.

Below, I reproduce a long-distance interview with a Tuareg man named Ahnou Immini in Agadez, Niger. Ahnou, now in his late 70s, earlier travelled and worked as a smith in Mali; he is now a respected *marabout* in Agadez. The interview was arranged in June 2015 by Tuareg jewelry specialist Cordelia Donohoe [<http://azultribe.com/about/>]. My thoroughly Western questions about talismanic rings were kindly relayed via Cordelia to Ahnou's son Mohamed, who was good enough to ask his father the questions and to translate the replies into English. Some clarificatory comments by Mohamed are also woven into the responses. I have appended a glossary of terms at the end of the dialogue.

Q. What are the basic tenets of *maraboutage* in regard to talismanic rings?

A. *Al-hawatim*^a are what we call these patterns from the Qur'an. And they are two sorts. The real ones in the Qur'an, which we call *al-hawatim*, are used for protection, whereas the fake one we call *maka*. The latter is used only for decoration... say, for example, the rings that you see everywhere for tourists. These are made by artisans [*inaden*] and they haven't any meanings. Tourists' stuff only. It is the same as if you ask an artisan to put Tifinagh in your necklace. He can put in those letters without knowing what he is writing or the "words" making any sense. Just signs.

The real one, used for *mahiba* or *iser*, this is from the Qur'an and is used for protection. Some *marabouts* can give you *al-hawatim* so that you get onto a plane flight and – even if that plane will crash – it won't happen until after you get off the flight.

These *al-hawatim* can't be worn everywhere... like a dirty place or by someone infidel who can enter anywhere he wants.

Q. Talismanic patterns don't appear directly in the pages of the Qur'an, so how are they deduced from the text?

The Qur'an is God's unique and universal book. God's speech sent to Mohamed his Prophet, PBUH. We have these *hadiss* or *el-kitaban*^b written by Mohamed's fidels (people who were learning from him) which people are now using everywhere. It is taboo in some Middle Eastern countries to wear *gris gris* or to wear a ring with talismanic patterns because, for them, you can use only what the Prophet said in the Qur'an, and you are not allowed to use what is said by people in *hadiss* or *el-kitaban*. But it is still said in the Qur'an "*ashrabu wa taghlabu*," i.e., "Drink and wear."^c In *hadiss* or *el-kitaban* like the one Ahnou uses [*Tāj al-mulūk al-musammá bi-Durrat al-anwār*, by Muḥammad ibn al-Ḥājj al-Kabīr]^d there are some sections which describe drinks [probably meaning texts/designs that can be washed off a board and drunk as a tonic or medicine; see photos immediately below] and some which describe talismans. "Drink and wear" is what people in countries such as ours base our practices upon. These *hadiss* or *el-kitaban* are used everywhere. That book [*Tāj al-mulūk*; see above] is sold in every place where Qur'anic books are sold.

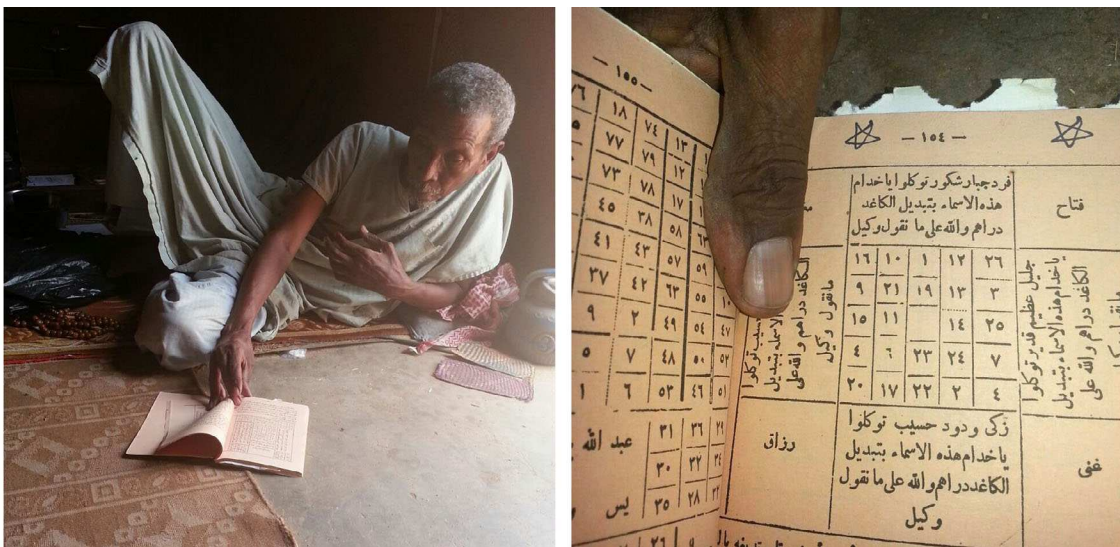


Ahnou Immini with wooden board; religious text is written on the board in blue ink and then washed off and bottled as a curative or tonic water for clients to drink. Photos © Cordelia Donohoe, used with permission.

Q. How does a Tuareg *marabout* decide what pattern of symbols to “prescribe” for a client, especially when it comes to making talismanic rings of the magic square type (i.e., symbols in a rectangular grid)?

A. It is the choice of the person who comes to see a *marabout* to say to him, “This is what I want, etc.” Then the *marabout* can see from the *ruhan* (i.e., *jinn*)^e of the person which patterns are suitable for him. But only a few *marabouts* can interact with the *ruhan*. For example, in a hundred *marabouts* you will find only five who have the *ruhan*. The *ruhan* can tell you exactly which day you are going to die.

In the Qu’ran it says “*ashrabu wa taghlabu*,” i.e., “Drink and wear.” In *hadiss* and *el-kitaban* like the one Ahnou uses [*Tāj al-mulūk*, mentioned above; see photos immediately below] there are some sections which describe drinks [see above] and some which describe talismans, including some for ring patterns. It depends on what the *marabout* in contact with his *ruhan* (*jinn*) will be asked to do to satisfy his client.



During the discussion with his son about talismanic rings, Ahnou Immini consults his copy of the *Tāj al-mulūk*. Photo © Mohamed Ahnou Immini, used with permission.

Q. Does each *marabout* have a set of patterns or symbols that they have acquired or inherited the rights to use?

A. No. There is no heritage in regard to what is in the Qur’an. Everyone has access. It’s just question of studying the Qur’an. But if a *marabout* has the *ruhan*, as some do, before they die they can teach one of their sons how to deal with the *ruhan*. But the person has to be clean and doing every sacrifice for these *ruhan*. This is why some *marabouts* who don’t respect that become fools. And if a *marabout* is making *al-hawatim* for someone and his *ruhan* ask for a sacrifice and the *marabout* asks his client to perform the sacrifice but the client doesn’t do it, the *marabout* becomes sick because those *jinn* revisit him.

Q. Do *marabouts* specify one grid pattern for a particular ailment and another pattern for a different disease?

A. They don't specify any pattern for a particular illness; if you are the client, then it depends on your *ruhan (jinn)* which patterns are suitable for you. If you are wearing *al-hawatim* – real, not fake – and you feel ill, you can just put the ring in the water for few minutes and then drink this water. The illness goes away. If you have no water, just put it in your mouth for few minutes.

Q. Do *marabouts* calculate the symbol repertoire and pattern using the name or age of the client?

A. These symbols in the repertoire, we call them *ighunab*.^f Nothing to do with the name or age of the person. It depends on each person what he wants the protection or remedy for. For example, some people when they are traveling in the desert caravan and are leaving the village, they stay a few minutes with the *marabout* who will write these patterns on the ground, and all those who are traveling will walk over it. That is to say, they will walk across what the *marabout* has written on the ground.

Q. Can an existing ring be "read" by a *marabout* to yield information about the client it was made for and the purpose it was to serve?

A. The ring can be read only by a *marabout* who knows the *ighunab* symbols. Not everyone. And he can find of course the main purpose of that ring and information about the reason that the person asked for that ring. But this is only if it is a real one and not a fake one like the artisans put on the rings that they are selling to tourists and lying to them by saying this is for protection, this pattern is for this purpose and for that.

A real ring, which has *al-hawatim* and has been made specially by a *marabout* who has *ruhan*, is itself protected; if it becomes lost [to the person for whom it was commissioned], the *jinn* take it back. You can't find it any more.

Glossary:

^a *Al-hawātīm* means "the seals" in Arabic; the singular, *al-hātim*, is the standard term for a magic square-type grid filled with numbers or symbols.

^b *Hadiss*, Hadith, i.e. collected reports purporting to quote the Prophet verbatim on any matter; *el-kitaban*, Arabic *al-kitābān*, "the books," i.e., ancillary texts by other religious figures.

^c "The Royal Crown, called the Glittering Jewel." Online at <http://catalog.hathitrust.org/Record/009035700>, accessed 1 Jul, 2015. Printed editions of this workbook go back at least to 1899.

^d E.g., Qur'an 7:31.

^e *Ruhan* are *jinn* or spirits from whom the *marabout* receives information, somewhat like the "familiar spirit" of Western esotericism. The word comes from the Arabic *rūḥānī* which means "spiritual science" or, in folk parlance, "white magic."

^f *Ighunab* is a Berber word which in Kabyle means "style." It is easy to see how it could be used as a collective term for a set of symbols.

Appendix 2

Silver Tuareg/Berber jewelry categorized by symbol content

This survey excludes patterns based solely or primarily on the symbols of the Seven Seals/Greatest name (i.e., it excludes the rings shown in Fig. 13a,c). It also excludes the few instances where relevant items appear in print publications rather than online.

Symbol types (A-K) are as defined in Table 1.

Country: if known; brackets indicate a highly probable origin. Items may be presumed Tuareg unless some more general locator (e.g. Berber) is specified.

Dim: height x width of grid in terms of cells; L4 = linear symbol sequence over 4 lines, etc.; X = face divided by X-shape into 4 triangular quadrants.

Diag sym: Y = diagonal symmetry, (Y) = imperfect diagonal symmetry; (N) = traces of diagonal symmetry in an otherwise non-symmetrical pattern; blank = no symmetry.

Same-symbol diagonals run top right to bottom left unless otherwise indicated.

Age: best guess; N = New, R = Recent, V = Vintage or antique.

Symbol type: Listed from most to least noticable or prevalent.

Num dots: Y = numerical dots present, blank = no numerical dots.

ID #	Country or locator	Item if not ring	Dim h x w	Diag sym	Age	Symbol type	Num dots	Notes
1. Tifinagh-like numerical								
11	Mali		6x5		R	AB		
18	Mali		4x4		V	AB		
12	Mali		4x4		R	AB		
32	Mali		3x3		V	AB		
94	(Mali)		4x4		V	AB		
87	(Mali)		5x5		V	AB		
71	Mali		(6x6)		V	AB		
86			9x9	(N)	V	AB	Y	
106			8x6		V	AB		
117			4x4		V	ABCD		
58	(Niger)		6x6		V	ABD		Fig. 1d
59	(Niger)		6x6?		V	ABD		
108			6x6		V	ABD		
101			6x6		V	ABD		

72	Mali		4x4		V	ABD		
132			5x4		V	ABD		
7	Mali		(6x6)		V	ABD		Fig. 1e
14	Mali		8x6		N	ABDG		
92			4x5		N	ABG		
133			4x4		V	ABG	Y	Style resembles #117
134			6x6	(N)	N	ABG	Y	Engraving resembles #43. Diags run top L to bot R.
66	Mali		6x4		V	ABG	Y	
126			8x7		R	ABGD	Y	Single numerical dot
124	Morocco		5x3	Y	N	ADG	Y	Diags run top L to bot R
90	(Mali)		4x4	Y	N	ADGB	Y	
123	Morocco		(6)x3		N	AG	Y	Mass-produced
57	(Mali)		5x7		V	AG	Y	Fig. 1f
26	Mali		3x3		V	AGBJ		
9	Mali		(4x4)		R	AGC	Y	
44	Mali		4x4		R	AGDB		
2. Normal numerical								
2A. Many or all italics (i.e., slanted script)								
4	Mali		9x7	Y	R	BAG	Y	
47	Mali		6x6	(Y)	V	BAGC	Y	Fig. 1b
54	Mali		6x6	Y	V	BAGC	Y	
109			6x6	Y	N	BAGC	Y	
10	Mali		6x5	(Y)	N	BCA	Y	
56	Mali		10x5		R	BCG	Y	Partial italics
53	Mali/Niger		(7x7)		V	BGA	Y	
2B. Few or no italics								
41	Mali		4x4		V	B	Y	
42	Mali		4x4		V	BA	Y	
15	Mali		L6		N	BA	Y	
23	Mali		L3		V	BA		
28	Mali		3x3		V	BA		
6	Mali		3x3	Y	R	BA		
33	Mali		L3		V	BA		
128	(Mali)		3x3		R	BA		
104			7x7	Y	V	BA		
24	Mali		L4		V	BA		
111			6x6	Y	V	BAC	Y	
129	(Mali)		4x4	Y	R	BAC	Y	
116			L4		V	BACG		
3	Mali		(5x5)		R	BACG	Y	
25	Mali		4x4		V	BAG	Y	
17	(Mali)		6x6	Y	V	BAG		

34	Mali		3x3		V	BAG		
115			8x8		V	BAG		Engraving resembles #85
61	(Niger)		6x6	Y	V	BAG	Y	
36	Mali		4x4		V	BAG		
131			6x6	Y	N	BAGC	Y	
31	Mali		L3		V	BAGHJ		
39	Mali		4x4	Y	V	BC	Y	
95	(Mali)		L4		N	BCG		
46	Mali		4x4	Y	V	BCG		
19	Mali		6x6	Y	R	BCGA	Y	
67	(Mali)		7x7	Y	V	BGA		Diags run top L to bot R
52	Mali/Niger		7x6		V	BGA	Y	Fig. 1a. Tifinagh on rev.
60	(Niger)		3x3	(Y)	V	BGA		
40	Mali		3x3		V	BGA	Y	
62	(Niger)		6x6	Y	V	BGA	Y	
35	Mali		4x4		V	BGA	Y	
37	Mali		4x4		V	BGA	Y	
16	Morocco		4x4		V	BGAC		
65	Mali		6x6	Y	V	BGC	Y	Fig. 1c
50	Mali/Niger		5x5?		V	BGCA	Y	
29	Mali		L4		V	BGCAH		
49	Niger		3x3		V	BHGA		
3. Pentagram-containing grid or associated symbol set								
3A. With pentagram								
130	(Mali)		3x3		N	EDBAG		
8	Mali		4x4	(Y)	V	EDCAG		Fig. 1h
45	Mali		6x6	Y	V	EDGCB	Y	
2	Mali		6x6	Y	V	EDGCB		Fig. 1g
89	(Mali)		6x6	Y	R	EDGCB		
107			6x6	Y	V	EDGCB		
3B. Without pentagram								
5	Mali		6x6	Y	R	BDAC	Y	
55	Mali		6x6	Y	V	BDCA	Y	
118	(Mali)		6x6	(Y)	R	BDCGA	Y	
48	(Mali)		5x5	Y	V	BDGA		Diags run top L to bot R
4. Pentagram or hexagram present but not part of grid								
93	(Mali)		8x11		V	EAB		
63	(Niger)		X		V	EAB		Fig. 2a
85			L2		R	EABF		Three large hexagrams
88			X		V	EBC	Y	
1	Mali		(8x8)	Y	V	EBGAC	Y	
5. Tifinagh letter-containing								
5A. Tifinagh or Tifinagh-like letters, sometimes with numbers								

120		Pendant	-		V	F		<i>Hamsa</i>
43	(Berber)	Pendant	6x6		V	FAG		Fig. 5a
64	Berber	Pendant	4x4		V	FAK		Fig. 5b
113	Morocco Berber	Pendant	-		V	FD		<i>Hamsa</i>
112	Morocco Berber	Earrings (pair)	-		V	FDCG		Spiral pattern. Counted as a single item for Table 1
114	Morocco Berber	Pendant	-		V	FDCG		Spiral pattern
122	Morocco		3x3		V	FG	Y	
5B. Tifinagh alphabet rings								
83	Niger		3x3		N	F		
84			2x2		V	F		
110			3x(4)		N	F		
121	Mali		4x4		N	F		
69			4x4		N	FD		
70	Niger		5x5		N	FD		
103	Niger		4x4		N	FD		
125	Niger		4x4		R	FD		
5C. Gri gri and gri gri-like								
78			5x3		V	F		
97		Plaque	4x4		V	F		
98		Plaque	4x4		V	F		
99		Plaque	4x3		V	F		
119		Pendant	4x3		R	F		
74		Plaque	5x3		V	FD		
75		Plaque	5x5		V	FD		
77		Plaque	3x3		V	FD		
79		Pendant	4x4		V	FD		
80	Niger		3x3		V	FD		
81		Plaque	5x6		V	FD		
82		Plaque	(5x3)		V	FD		
73		Plaque	4x4		V	FED		Grouped here despite in- grid pentagram
127			2x3		V	FIG		
6. Idiosyncratic								
105			L2		R	G		
96			L3		R	GA		Many Western numerals?
20	Mali		4x4		V	GAB		
30	Mali		4x4		V	GAB		
38	Mali		3x3		V	GABIF	Y	Fig. 1i
27	Mali		3x3		V	GBA		
100			L4		V	GBCA	Y	

68	‘Sahara’	Pendant	5x5		N	GCB		Counted as two items for Table 1.
		(reverse)	4x4			GCB		
7. Arabic words								
91			3x3		R	H		
13	Niger		-		V	HBI	Y	Fig. 2b & 13c; Seven Seals on reverse.
21	Mali		-		V	HC		
22	Mali		L2		V	HJ		